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VOL. XIX. NO. 10.

MAY 15, 1891.

PEACE ON EARTH  
GOOD WILL TOWARD MEN



GLEANNING  
IN

BEE CULTURE

S W Conrad

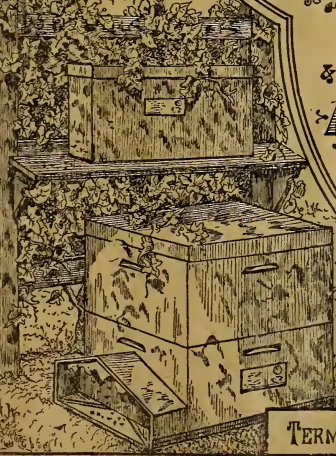
DEVOTED  
TO  
THE BEEKEEPER

& HOME INTERESTS.

MEDINA OHIO

BY

AL ROOT



TERMS, ONE DOLLAR PER YEAR.

W. H. DUNN, MEDINA, OHIO



## GLEANINGS IN BEE CULTURE.

### GLEANINGS IN BEE CULTURE.

ESTABLISHED IN 1873.

DEVOTED TO BEES, HONEY, & HOME INTERESTS.  
PUBLISHED SEMI-MONTHLY BY

**A. I. ROOT, - MEDINA, O.**

A. I. ROOT, EDITOR.

ERNEST R. ROOT, - - ASSOCIATE EDITOR.

J. T. CALVERT, BUSINESS MANAGER.

**Terms.** \$1.00 per annum; two years, \$1.80; three years, \$2.50; five years, \$3.75, *in advance*; or two copies to one address, \$1.80; three copies, \$2.50; five copies, \$3.75. These terms apply both to the United States, Canada, and Mexico. To all other countries in the Universal Postal Union, 18 cents per year extra for postage. To all countries out of the U. P. U., 42 cents per annum extra.

**Discontinuances.** The journal is sent until orders are received for its discontinuance. We give due notice when the subscription expires, and further notice if the first is not heeded. Any subscriber whose subscription has expired, wishing his journal discontinued, will please drop us a card at once; otherwise we shall assume that he wishes his journal continued, and will pay for it soon. If you wish your journal discontinued at the end of the time paid for, specify that fact in ordering, and your wishes will be respected.

**Terms to Agents Who Secure Subscriptions.** Clubs to different postoffices, 90 cents each; or to the same postoffice, 75 cents each, providing that the names secured are for not less than \$1.00 each, nor advertised for less than \$1.00. In other words, a subscriber who, by personal solicitation, secures subscriptions in his own locality, may retain 25 cents for every name taken for \$1.00; but at least half the names so secured must be new, and cash must accompany order.

**Receipts for Money.** We send no receipt for subscription money. The change of the date on the little label shows you that the money has been duly received, and credited. During December and January it sometimes takes us three or four weeks before the date is changed.

**How to Send Money.** You can send money at our risk by P. O. order, express money-order, or bank check or draft, and where none of these means are available, by registered letter. Money sent in any other way is at your risk. We pay no exchange or express charges on money. Be sure to sign your express money-order, or indorse your check or draft, if not made payable to order of A. I. Root. If you neglect this it will have to be sent back to you.

**Rates of Advertising.** On not less than 5 lines, per single insertion, and for a uniform space each issue, our rates per nonpareil line are as follows:

#### TIME RATES.

1 to 2 insertions, per line.....	20c
3 to 5 " " " .....	19c
6 to 11 " " " .....	18c
12 to 17 " " " .....	17c
18 to 23 " " " .....	16c
24 insertions " " " .....	15c

On from 3 to 7 inches space, 1c per line *less* than above rates.

On 8 inches or more, 2c per line *less*.

On less than 5 lines space, 1c per line *more* than above rates.

By nonpareil line we mean  $\frac{1}{2}$  of an inch of space up and down the column. Twelve nonpareil lines of space, therefore, measure one inch. Remember that an ad. that is "displayed" may have only two or three lines of big letters, yet may measure 24 nonpareil lines of space.

For electrotyped advertisements we will allow an additional discount of 5 per cent on both time and space rates.

**A. I. ROOT, Medina, O.**

### CLUBBING LIST.

We will send GLEANINGS with—  
The American Bee Journal, weekly, (\$1.00) \$1.75  
The Canadian Bee Journal, weekly, (.75) 1.65  
The Bee-Keepers' Review, (1.00) 1.75  
The British Bee Journal, (1.50) 2.00  
American Apiculturist, (.75) 1.70  
American Bee-Keeper, (.50) 1.40  
All of the above journals, 5.65

American Agriculturist,	(\$1.50)	2.25
American Garden,	(2.00)	2.60
Prairie Farmer,	(1.50)	2.35
Rural New-Yorker,	(2.00)	2.90
Farm Journal,	(.50)	1.20
Scientific American,	(3.00)	3.75
Ohio Farmer,	(1.00)	1.90
Popular Gardening,	(1.00)	1.85
U. S. Official Postal Guide,	(1.50)	2.25
Sunday-School Times, weekly,	(1.50)	1.75
Drainage and Farm Journal,	(1.10)	1.75
Fanciers' Monthly,	(1.10)	1.75
Illustrated Home Journal,	(.50)	1.35
Orchard and Garden,	(.50)	1.40

[Above Rates include all Postage in U. S. and Canada.]

## MUTH'S Honey - Extractor.

Square Glass Honey-Jars,  
Tin Buckets, Bee-Hives  
Honey-Sections, &c., &c.  
Perfection Cold-Blast Smokers.

APPLY TO

**CHAS. F. MUTH & SON, Cincinnati, O.**

P. S.—Send 10-ct. stamp for "Practical Hints to Bee-keepers."  
Please mention this paper.

### OUR ROOT BEES.

We have Italians that "Root" the flowers o'er and o'er.  
At the end of the season they will score you 100 lbs. or more.

Tested queens in May, \$1.50; 3 for \$4.00.

Unt'd " " June, 1.00; 3 for 2.50.

" " " " June, .75; 3 for 2.00.

1, 2, and 3 frame nuclei from \$2.25 to \$4.00, with queen. Pounds of bees. All kinds of aparian supplies, etc. Catalogue free. 9tfdb

**JOHN NEBEL & SON, High Hill, Mo.**

Please mention this paper.

## LEATHER-COLORED

**PRICE LIST FREE ON APPLICATION.**

A. E. MANUM, - - BRISTOL, VT.

## ITALIAN QUEENS.

Please mention this paper.

7-14db

### DR. TINKER'S SPECIALTIES!

The Nonpareil Bee-hive and Winter case, White Poplar Sections, Wood-zinc Queen Excluders, and the finest and best Perforated Zinc now made.

Send for catalogue of prices, and inclose 25 cts. for the new book, **Bee-keeping for Profit.**

Address

**DR. G. L. TINKER,**

New Philadelphia, O.

21tfdb

In writing to advertisers please mention this paper.

1891

Early Italian queens from bees bred for business. Each \$1.00; six \$4.50. Order now, pay when queen arrives. 7tfdb W. H. LAWS, Lavaca, Ark.

ITALIAN

QUEENS and BEES, and Fine Poultry. Send for price list.

**I. L. PARKER,**

9tfdb Tracy City, Tenn.





"I tell you what, Jones, Levering Bros. sell the best goods and at the lowest prices of any one I've struck yet."

## The LARGEST and BEST EQUIPPED BEE-HIVE FACTORY IN THE WEST.

THE NEW DOVETAILED HIVE A SPECIALTY.

Every thing used by practical bee-keepers by wholesale and retail. Send for our '91 illustrated price list and save money. Address 4-15db

**LEVERING BROS., Wiota, Cass Co., Ia.**

In responding to this advertisement mention GLEANINGS.

## BEE-KEEPER'S GUIDE.

16TH THOUSAND JUST OUT.

Plain, Practical, Scientific. Every farmer and bee-keeper should have it.

PRICE REDUCED TO \$1.00. Liberal discount to dealers. Address 8-18db

**A. J. COOK, Agricultural College, Mich.**  
Please mention GLEANINGS.

## UNTESTED QUEENS,

until June 1st, \$1.00; after June 1st, 75 cts.; \$8.00 per doz. Tested queens, after June 1st, \$1.50. Select tested, \$2.00. Bees by the pound until June 1st, \$1; after June 1st, 75 cts. Can supply any demand from first of May. Untested, in May, \$9.00 per doz. 8tfdb

**PAUL L. VIALLO, BAYOU GOULA, LA.**

In responding to this advertisement mention GLEANINGS.

## Western Bee-Keepers' Supply House

Root's Goods can be had at Des Moines Iowa, at Root's Prices. The largest supply business in the West. Established 1855. Dovetailed Hives, Sections, Foundation, Extractors, Smokers, Veils, Crates, Feeders, Clover Seeds, etc. Imported Italian Queens. Queens and Bees. Sample copy of our Bee Journal, "The Western Bee-keeper," and Latest Catalogue mailed Free to Bee-keepers.

**JOSEPH NYSEWANDER, DES MOINES, IOWA.**

In responding to this advertisement mention GLEANINGS.

## \$1.00 QUEENS READY TO MAIL. \$1.00

Queens reared from one of Doolittle's select moths, by his method. Orders booked now; pay when queens are received. Write for quantity prices. Safe arrival and satisfaction guaranteed. 9-10d

**JOHN B. CASE, Port Orange, Vol. Co., Fla.**

In responding to this advertisement mention GLEANINGS.

## Cash for Beeswax!

Will pay 28c per lb. cash, or 30c in trade for any quantity of good, fair, average beeswax, delivered at our R. R. station. The same will be sold to those who wish to purchase, at 33c per lb., or 37c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent, I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

**A. I. ROOT, Medina, Ohio.**

## Root's Household Repairing-Outfit



consists of 3 iron Lasts and standard, 4 packages assorted "Holdfast" clinch nails, four waxed ends fitted with needles and bristles, all the tools and materials shown in this cut, and more besides. With directions accompanying, any person of average ingenuity can do his own half-soling boot, shoe, rubber, and harness repairing. Entire outfit, neatly boxed, weighs only 20 lbs., only \$2. Saves time, trouble, expense, wet feet, and crooked shoes. We want agents in every neighborhood. You can easily sell enough to your neighbors to pay for your own outfit, and more too. "Just what I have often wished for. Especially useful in a family of children."—E. J. WARD, Duplain, Mich. Send postal for descriptive circular, and get some new ideas, if nothing else.

**ROOT BROS.,**

**MEDINA, OHIO.**

In responding to this advertisement mention GLEANINGS.

## TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on One-Piece Basswood Sections, Bee-Hives, Shipping-Crates, Frames, Foundation, Smokers, etc. **PAGE, KEITH & SCHMIDT CO.,** 21-12db New London, Wis.

In responding to this advertisement mention GLEANINGS.

**B**EEES and yellow Italian Queens for sale in June at Chicago Valley Apiary. **E**VEN the Best Selected Tested \$1.25. **E**XCEL. They do all other seasons' work. **S**END for circular. **MRS. OLIVER COLE, Sherburne, Chenango Co., N. Y.** Please mention this paper.

## NO MORE BEES

by pound after this journal reaches you. 10d  
**MRS. JENNIE ATCHLEY, Farmer'sville, Tex.**

## \*BEST ON EARTH\*



ELEVEN YEARS WITHOUT A PARALLEL, AND THE STANDARD IN EVERY CIVILIZED COUNTRY.

**Bingham & Hetherington**  
**Patent Uncapping-Knife,**  
Standard Size.

**Bingham's Patent Smokers,**

Six Sizes and Prices.

Doctor Smoker,	3 1/4 in.,	postpaid ..	\$2.00
Conqueror	3	"	1.75
Large	2 1/2	"	1.50
Extra (wide shield)	2	"	1.25
Plain (narrow)	2	"	1.00
Little Wonder,	1 1/4	"	.65
Uncapping Knife.....			1.15

Sent promptly on receipt of price. To sell again, send for dozen and half-dozen rates.

Milledgeville, Ill., March 8, 1890.

SIRS:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do your trade will boom. Truly, **F. A. SNELL.**

Vermillion, S. Dak., Feb. 17, 1890.

SIRS:—I consider your smokers the best made for any purpose. I have had 15 years' experience with 300 or 400 swarms of bees, and know whereof I speak. Very truly, **R. A. MORGAN.**

Sarabsville, Ohio, March 12, 1890.

SIRS:—The smoker I have has done good service since 1883. Yours truly, **DANIEL BROTHERS.**

Send for descriptive circular and testimonials to **1tfdb BINGHAM & HETHERINGTON, Abromia, Mich.**

In responding to this advertisement mention GLEANINGS.

## Wants or Exchange Department.

Notices will be inserted under this head at one half our usual rates. All advertisements intended for this department must not exceed five lines, and you must say you want your adv't in this department, or we will not be responsible for errors. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale, can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

**WANTED.**—To exchange pure Brown Leghorn eggs for tested Italian queens. 5-ftdb  
GEER BROS.,  
St. Marys, Mo.

**WANTED.**—Pure Italian queens, sections, nursery stock, or offers, for pure P. Rock eggs or Quinby hive-corner clasps. 6-ftdb  
L. C. AXTELL, Roseville, Ill.

**WANTED.**—To exchange comb foundation for beeswax. 7-10db  
E. S. BROOKS, Silvertown, Marion Co., Ore.

**WANTED.**—To exchange brooder, corn-sheller, S. C. W. Leghorns, B. Minorcas, for road-cart, apiarian supplies, Italian bees, or offers. 8-ftdb  
ELIZABETH DIMICK, Burns, Steuben Co., N. Y.

**WANTED.**—To exchange or sell cheap a Given foundation press with dipping-tank and boards complete; cost \$55. Good as new; \$35 cash will take it. What have you to exchange? 8-ftdb  
FRANK A. EATON, Bluffton, O.

**WANTED.**—To exchange a double-case "World" typewriter, nearly new, for a small printing-press and outfit, worth from \$12 to \$25. Will pay the difference for a suitable outfit. 9-10d  
W. W. ADDISON, Mt. Vernon, Jeff. Co., Ill.

**NO ICE.** Will trade milk-shake, good as new, for any thing useful. J. T. MICHAEL, German, O.

**WANTED.**—To exchange pure Scotch collie pups for tested Italian queens. 9-10d  
N. A. KNAPP, Rochester, Lorain Co., O.

**WANTED.**—To exchange sections for beeswax. I will allow 35c per pound, for good clear wax, to be paid for in nice No. 1 sections at \$2.50 per 1000. 9-10d  
W. H. NORTON,  
Manufacturer of Bee-keepers' Supplies,  
Skowhegan, Me.

**WANTED.**—To exchange for beeswax, L. combs (17% x 9%) at 6c each; packed 11 in good, painted, old 8-frame hives, with cover and tight bottom, 90c. Sections of New Heddon hive (new, well made, and painted) with set of 8 combs, 60c each. Combs in good condition, nearly all worker, and built in wired frames. 10-11d  
H. D. BURRELL, Bangor, Mich.

**TO EXCHANGE,** a one-horse ensilage cutter, or Brown Leghorn eggs, for a small hand hay-cutter, or offers. A bargain for some one. 10-12d  
C. W. COSTELLO, Waterboro, Me.

**WANTED.**—To exchange supplies for Japanese buckwheat. 10d  
W. D. SOPER & Co.,  
Jackson, Mich.

**WANTED.**—Bees in exchange for supplies. 10d  
F. C. ERKEL, LeSueur, Minn.

**WANTED.**—To exchange a foot-power buzz-saw for bees or honey, after honey harvest. 10-11d  
H. L. HUTCHINSON, Mayville, Mich.

**WANTED.**—To exchange foundation, both light and heavy, for any quantity of wax. 10-11-12d  
B. CHASE, Earlville, N. Y.

**C. E. Peaslee, Gonic, N. H.,** has L. frames of comb and second-hand L. hives to exchange for bees, sections, honey, or offers. 10d

**WANTED.**—To correspond with parties having potatoes, onions, apples, and honey for sale. Prompt attention given to correspondence. Consignments solicited. Prompt returns made. 19-ftdb  
EARLE CLICKENGER, 121 So. 4th St., Columbus, O.

**WANTED.**—To exchange a six-horse engine and boiler for bees, or honey of this season's crop. 10d  
ROE & KIRKPATRICK, Union City, Ind.

## THE AMERICAN BEE JOURNAL

32 pages—\$1.00 a year—Sample Free.

The oldest, largest and cheapest Weekly bee-paper

THOMAS G. NEWMAN & SON,

246 East Madison Street, CHICAGO, ILL.

In responding to this advertisement mention GLEANINGS.

**SEND** to M. S. West, Flint, Mich., for circular of Bee Supplies. Wax made into foundation. 10d

## Job Lot of Wire Netting.

CUT PIECES AT A LOWER PRICE THAN FULL ROLLS.

Having bought from the factory, at our own price, five or six hundred remnants, as listed below, we are able to give you the choice of a great variety of pieces at the price of a full roll or lower. Full rolls of netting are 150 ft. long, and when they are cut we have to charge nearly double the full-roll rate, because it is so much trouble to unroll, measure, and cut, and run the risk of having a lot of remnants on hand. No doubt it is in this way that the following remnants have accumulated. It costs a good deal to get all this in shape so we can easily pick out from the lot the piece you want. But to move it off quickly, we put the price down so you can all have a chance at it. Remember, first come, first served. In ordering, therefore, name a second or third choice, or say that we may send the nearest we can if the piece selected is gone. On 5 pieces deduct 5 per cent, on 10 pieces 10 per cent. These remnants are shipped only from here. If any of you want to secure some, and don't want them shipped till later, when you will order something else, so as to save freight, pick out the pieces you want, send remittance with the order, with request to lay by till called for, and we will mark them as belonging to you. We prefer to ship them right out, however.

LIST OF POULTRY-NETTING REMNANTS.

Width in in's.	Size of Mesh.	No. of Wire.	Cts. pr Sn. Ft.	Length of each piece. Multiply by the width in feet to get the number of square feet in each piece. Then multiply by the price per foot for the price per piece.
72	2	20	3/4	95.27.
72	2	19	3/4	125, 103, 100, 94, 88, 73, 68, 67, 48.
72	2	18	1	61, 53, 48, 37, 35, 22, 22, 30 in., 60, 25.
36	2	17	1 1/4	23 1/2; 24 in. wide, 77.
36	2	16	1 1/4	34, 32, 23; 18 in. wide, 72, 72, 40; 24 in. wide, 94, 88.
72	2	16	1 1/4	60, 58, 16; 0 in. wide, 46, 24; 48 in. wide, 48.
18	2	15	2	87, 61, 30; 12 in. wide, 100.
24	2	15	2	100, 90, 69, 52, 33, 13, 12.
36	2	15	2	17, 13, 7, 7, 6, 5; 60 in. wide, 21, 20.
42	2	15	2	121, 35, 26, 23, 20, 8; 72 in. wide, 56, 33, 9.
48	2	15	2	72, 49, 48, 45, 38, 37, 30, 29, 26, 14.
30	1 1/2	19	1	33, 36 in. wide, 47, 47.
18	1 1/2	19	1	85, 59; 60 in., 56; 72 in., 64, 63, 10.
18	1 1/2	18	1 1/4	40, 14; 54 in., 12; 60 in., 34.
30	1 1/2	16	2 1/4	79; 36 in., 14; 42 in., 34; 48 in., 92.
36	1 1/2	16	2 1/4	22.
36	1 1/2	19	1 1/4	48, 12, 10; 24 in., 42; 30 in., 75; 48 in., 78.
36	1 1/2	18	2	15, 11, 10; 30 in., 6; 42 in., 80; 48 in., 22; 72 in., 8.
48	1	20	1 1/4	53; 72 in., 51; 30 in., 96; 9 in., 40.
24	1	19	2	26; 9 in., 24; 42 in., 30; 34; 48 in., 100, 40, 25; 60 in., 76; 18 in., 50.
32	1	18	2 1/4	85, 32; 24 in., 23; 30 in., 69, 51.
36	1	18	2 1/4	37; 48 in., 30; 60 in., 59.
36	1	20	2 1/4	7; 36 in., 75, 55.
24	3	16	1	46, 19; 36 in., 86; 42 in., 14.
36	3	15	1 1/4	63; 48 in., 60.
48	3	14	1 1/4	45; 72 in., 100, 70.
14	4	14	3	106, 52, 35, 23.
22	4	14	4	107, 68, 35, 17, 15.
30	4	14	4 1/4	52, 47, 36, 33, 30, 29, 19, 18, 13, 9.
34	4	14	4 1/4	43, 37, 34, 25, 24, 23, 18.
42	4	14	5	117, 68, 62, 60, 23, 22, 22, 15, 12, 12, 8, 6.
46	4	14	5 1/2	82, 50, 44, 11, 5.
18	8	13	2	68 ft.; 36 in., 200 ft. at 4c; 45 in., 247 ft. at 5c.

Four and eight inch fencing. Price in fourth column is the price per foot in length.

A. I. ROOT, Medina, O.



## IF YOU WANT BEES

That will just "roll" in the honey, try **Moore's Strain of Italians**, the result of twelve years' careful breeding. Prices in June: Warranted queens, \$1.00 each; 3 for \$2.50. Strong 3-frame nucleus, with warranted queen, \$3.00. Safe arrival and satisfaction guaranteed. Those who have never dealt with me I refer to A. I. Root, who has purchased of me, during past 11 years, 505 queens. Circulars free. 10-11-12d

**J. P. MOORE, Morgan, Pendleton Co., Ky.**  
Money-order office, Falmouth, Ky.

☞ In responding to this advertisement mention GLEANINGS.

## ITALIAN 100 QUEENS.

Untested Queens, 75 cts. each. \$6.00 per dozen.  
Now ready to mail. 9tfdb

**H. Fitz Hart, Avery p. o., New Iberia, La.**  
☞ In responding to this advertisement mention GLEANINGS.

## Pure Italian BEES by the Pound, 90c.

Untested Queens from Imp. Mother, 80c.

2-frame nuclei, both containing brood and all adhering bees, with untested queen, \$2.00. Satisfaction guaranteed. 10d **MRS. A. F. TROPER,**  
**Portland, Jay Co., Ind.**

☞ In responding to this advertisement mention GLEANINGS.

## Bee-keepers, Look Here!

Leininger Bros. are going to rear 1000 Queens this year from one of G. M. Doolittle's best queens; and if you want bees for

## Business & Beauty Combined,

try one of their queens. In June, \$1.00; tested, \$1.70; select, \$2.50. The very best, \$4.50. Descriptive circular free. 10tfdb

**LEININGER BROS., Ft. JENNINGS, OHIO.**

☞ In responding to this advertisement mention GLEANINGS.

We are making arrangements for the agency of those

## WONDERFUL PUNIC BEES,

brought to England by "a Halleshire bee-keeper," and are now booking orders at the following rate:

Imported queens, \$4.00 each.

Tested pure homebred, \$5.00 each.

Virgins, \$1.00; 1/2 doz., \$5.00; per doz., \$10.00.

Send for Punic circular. 10-11d

**E. L. PRATT, Pratt Bee-Farm,**

**Beverly, Mass.**

☞ In responding to this advertisement mention GLEANINGS.

## SUPPLIES BY ELECTRICITY.

Observatory Hives, Improved Supers, Shallow Frames. **E. CALVERT, Des Moines, Ia.**

## New Orleans Apiaries.

Untested Italian and Carniolan Queens, for May and June, \$1.00 each; after, 75 cts. 10tfdb

## BEES FOR BEAUTY AND BUSINESS.

Purity and safe arrival guaranteed. Address

**WINDER & SIPLES, 576 MAGAZINE ST.,**  
**NEW ORLEANS, LA.**

☞ In responding to this advertisement mention GLEANINGS.

## WANTED!

In exchange for queens, 20 lbs. of bees, any race, but no foul brood. I will give one young tested three or **Five Banded Italian** Queen (to be sent the fore part of June), for every pound of bees sent me **now, charges paid.** If you wish queens of either strain, and can spare the bees, drop me a card, and send at once. Reference, postmaster or express agent here. Send bees at once. Address **JACOB T. TIMPE,** 9tfdb

Exp. and P. O. Address, **Grand Lodge, Mich.**  
Please mention this paper.

## HONEY COLUMN.

### CITY MARKETS.

**NEW YORK.**—*Honey.*—Market is entirely bare of comb honey, and the article is of no interest, until the new crop comes in. Extracted:—We have a good demand for Florida and Southern honey, which would sell readily at from 7½¢ to 8¢ for former, and 7½¢ per gallon for the latter. Supply of California is ample for the demand, and prices range from 7¢ to 7½¢. *Beeswax* is very scarce; we quote, 29¢ to 31¢, according to quality. **F. G. STROHMEYER & Co.,**  
May 9. New York.

**MILWAUKEE.**—*Honey.*—The supply of choice quality of section honey is growing less, and more of a supply will be needed for the market before new crop can come. Will quote: 1-lb. sections, white, 18¢ to 19¢; second best, 16¢ to 17¢; common, 13¢ to 15¢; dark and old, 11¢ to 12¢. Extracted, in barrels and kegs, white, 8¢ to 8½¢; in barrels and cans; amber, 6¢ to 7½¢. *Beeswax*, 28¢ to 30¢. **A. V. BISHOP,**  
May 9. Milwaukee, Wis.

**CHICAGO.**—*Honey.*—Market is about all cleaned out of comb honey; not any of the best grades remain. Demand is also nominal, as the small-fruit season is with us, which always seems to have the effect of stopping the sale of honey. Extracted, when in good order, brings 7¢ to 8¢. *Beeswax*, 28¢. **R. A. BURNETT,**  
May 8. 161 So. Water St. Chicago, Ill.

**ALBANY.**—*Honey.*—We are entirely out of comb honey, and have considerable call for it. Have just received 12 barrels of extracted honey from Cuba. No change in price. **CHAS. MCCTULLOCH & Co.,**  
May 8. 393, 395, & 397 Broadway,  
Cor. Hudson Ave., Albany.

**ST. LOUIS.**—*Honey.*—Market quiet; comb at unchanged quotations. There is considerable inquiry for strained in barrels, which, if in stock, would bring 6½¢ to 6¾¢. Prime *beeswax*, 27½¢. **D. G. TUTT GROCER Co.,**  
May 9. St. Louis, Mo.

**DETROIT.**—*Honey.*—No first-class comb honey in the market. Dark and unsightly lots selling slowly at 11¢ to 13¢. Some good would bring 15¢. Extracted, 8¢ to 9¢. *Beeswax*, 29¢ to 30¢. **Bell Branch, Mich.,** May 9. **M. H. HUNT.**

**KANSAS CITY.**—*Honey.*—The demand is very light for all kinds of honey; especially for extracted and two-pound California comb. We quote: Comb, 1-lb., white, 16¢ to 18¢; 1-lb. dark, 12¢ to 14¢; 2-lb. white, 12¢ to 13¢; extracted, 6¢ to 6½¢. **CLEMENS, MASON & Co.,**  
May 9. Kansas City, Mo.

**BOSTON.**—No change in price of honey; sales a little slow on account of extremely low price of maple sugar. Extracted selling from 7½¢ to 8½¢. *Beeswax*.—None on hand.

May 9. **BLAKE & RIPLEY, Boston, Mass.**

## 5-BANDED GOLDEN ITALIANS.

Beauties! The best workers we ever saw. Work on red clover. Very gentle. Drones 1 to 1 yellow. Won **1st Premium at Ill. State Fair** in 1890. Nearly 300 booked for 1891. Warranted Queens, May, \$1.25, 6 for \$6.00; after June 1st \$1.00, 6 for \$5.00. Special discount for large orders as to dealers. Satisfaction guaranteed. No foul brood. Good reference given.

10tfdb **S. F. & I. TREGO, Swedona, Ill.**

☞ In responding to this advertisement mention GLEANINGS.

## Look Here!

Nice white one-piece sections. No. 1, \$3.00 per M.; No. 2, \$2.00 per M. Tested Italian queens, \$1.50 each, in May. A 20-page price list free. 10-11-12d

**J. M. KINZIE, ROCHESTER, MICH.**  
Please mention this paper.



## A Rare Chance

If you desire a good home within stone's throw of railway, express, and post office, in one of the very best 10-11d

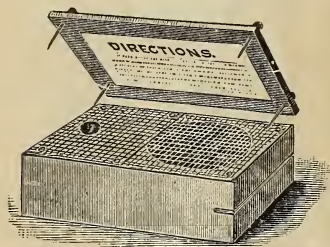
## HONEY

locations in the United States, write me for particulars. Excellent neighborhood. An apiary of 90 colonies, with fixtures, will be sold or leased with the place. Terms easy. Address

**JAMES HEDDON, DOWAGIAC, MICH.**

☞ In responding to this advertisement mention GLEANINGS.

**FRIENDS,** if you want three or four L. frame nuclei full of nice Italian bees, queen, and capped brood, or queens, that will give satisfaction, at reasonable prices, write to 7tfdb  
W. A. SANDERS, Oak Bower, Hart Co., Ga.



Price for	1	10	100
Complete	\$4.50	\$45.00	\$450.00
Complete ex-cept candy	.45	.40	.35
Post. 1c each.			

FOR MAILING AND INTRODUCING, THE

## DIXIE QUEEN - CAGE

is Safe, Simple, Neat, and Cheap. Your address printed on 100 or more, free. Printed directions with all. Try it. 9-10d

**JENKINS & PARKER, Wetumpka, Ala.**

In writing advertisers please mention this paper.

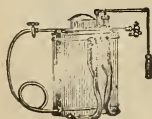
## Porter's Spring Bee-Escape.

We guarantee it to be the best escape known, and far superior to all others. If, on trial of from one to a dozen, you do not find them so, or if they do not prove satisfactory in every way, return them by mail within 90 days after receipt, and we will refund your money.

PRICES:—Each, by mail, postpaid, with full directions, 20c; per dozen, \$2.25. Send for circular and testimonials. Supply dealers, send for wholesale prices.

10tfdb **R. & E. C. PORTER, LEWISTOWN, ILL.**

☞ In responding to this advertisement mention GLEANINGS.



3-101b

## SPRAY YOUR FRUIT TREES AND VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculia prevented by using **EXCELSIOR SPRAYING OUTFITS.**

**PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES.** Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address **W.M. STAHL, Quinex, Ills.**

☞ In responding to this advertisement mention GLEANINGS.



A glimpse of our Factory, now making carloads of Dovetailed Hives, Lang. Simp. hives, plain Lang. hives. Alternating hives, Chaff hives, sections, etc. Many articles not made by others.

We can furnish, at wholesale or retail, Every thing of practical construction needed in the apiary, and at Lowest Prices. Satisfaction guaranteed. Send for our New Catalogue, 51 illustrated pages, free to all. 4tfdb

**E. KRETCHMER, Red Oak, Iowa.**

☞ In responding to this advertisement mention GLEANINGS.

## FIVE-BANDED QUEENS.

My Five-banded Queen and Bees were awarded **First Premium** last fall at the Detroit Exposition, by T. G. Newman, editor of the A. B. J. They are very **handsome** and **gentle**, bees are good workers, and queens are prolific layers. Price of untested Golden Five-banded Italian queens, after June 1st, \$1.00 each, or 6 for \$5.00. Orders booked now, and filled in rotation. Make money orders payable at **Flint, Mich.** 9-10d

**ELMER HUTCHINSON,**

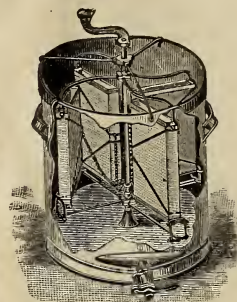
**ROGERSVILLE, GENESEE CO., MICH.**

Please mention this paper.

## SUPPLIES.

Standard goods, best shipping-point, reasonable price. 30-page catalogue free.

WALTER S. POWDER, 175 E. Walnut St., Indianapolis, Ind. 5-18db



5tfdb

Please mention this paper.

## EVERY THING USED BY BEE - KEEPERS.

EDWARD E. NEWCOMB.

Pleasant Valley, N. Y.

CATALOG  
FREE

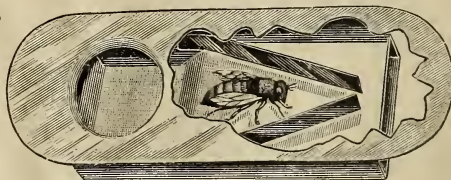
## Bee - Keepers' \* Supplies.

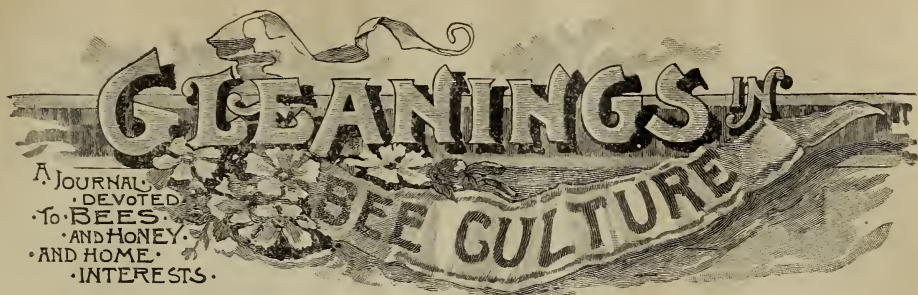
We are prepared to furnish bee-keepers with supplies promptly and at lowest rates. Estimates gladly furnished, and correspondence solicited. Our goods are all first class in quality and workmanship. *Catalogue sent free.* Reference, First National Bank, Sterling, Ill. Address

**WM. McCUNE & CO.,**  
**Sterling, Illinois.**

21-20db

☞ In responding to this advertisement mention GLEANINGS.





Published by A. I. Root, Medina, O.

Vol. XIX.

MAY 15, 1891.

No. 10.

## STRAY STRAWS

FROM DR. C. C. MILLER.

A POULTRY DEPARTMENT added to C. B. K.

THERE ARE SOME things that I know all about, but it isn't about bees.

CHEAP HONEY is Hutchinson's cure for adulteration. Too cheap to be good.

NECTAR contains 60 to 85 per cent water, generally 80 to 85 per cent: ripe honey, 18 to 25 per cent.

D. A. JONES defends in vigorous style his belief that honey is the principal vehicle for carrying foul brood.

POLLEN from white, red, and alsike clovers, Doolittle says in *A. B. J.*, is not of different colors, but all greenish-brown.

A FRENCH bee-keepers' song is wanted, and a prize (Dadant's French Langstroth) offered therefor. Have the French a Secor?

HUTCHINSON'S SKIMMER is in good working order— $3\frac{1}{2}$  pages of "cream" in last number, and  $\frac{3}{8}$  of it from GLEANINGS. Nice compliment for GLEANINGS.

IN BAKING BREAD, or at any other time, if your oven is too hot, put a pan of cold water in it and you'll be surprised to see how rapidly it will cool off.

SOFT MAPLE was in bloom March 30, but it turned cold right off, and wasn't warm enough to get bees out till April 12. Don't put your trust in maple bloom.

SPREADING THE BROOD-NEST. H. Spuhler, in *Revue*, says of it: When we wish to resort to it, it is dangerous; and when it is no longer dangerous we can dispense with it.

EXCLUDER ZINC. The *B. B. J.* says, "We prefer the metal to lie close on to the top-bars, with no space between, and with the lengthway of the holes running across the space between the frames."

MY RESPECT for E. R. R. is increasing. On page 323 he applies "she" and "her" to a worker instead of "he" and "him." Twenty years from now I hope no one will speak of he-workers.

INTERESTING AND PROFITABLE conventions—how to make them so, was discussed at the Ohio State Convention. Among things suggested were: Talk; recess; getting acquainted; asking questions. Listening to long essays was not mentioned.

A. G. HILL tells in the *Review*, that, in 11 consecutive years, he found the average shrinkage on summer stands, protected thoroughly, was 12 lbs. 14 oz. per colony from Nov. 1 to April

1; in cellar, about  $1\frac{1}{2}$  lbs. less, but the outdoor bees were more thrifty, and seemed to have more brood. Would it be the same further north?

DON'T EITHER. Friend Hatch, I don't see that you would be obliged at all to keep from changing ends with round-headed nails on top-bars. But after trying the Van Deusen spacers, I don't believe I should be satisfied with them or with nails either.

ELWOOD REPORTS his bees carried into the cellar with closed-end frames at the rate of two per minute for five men. Mine, with open-end frames, were carried out at the rate of two and a half per minute for five men. But they were dangerously light.

HARMON SMITH, in *A. B. J.*, is after the Michigan convention with a sharp stick, because of their adulteration resolution. He thinks there was no foundation for the statement, "that many of the cities of this State are supplied with adulterated honey."

MR. COWAN, in his new book, tries very carefully to conceal the fact that he has ever made any investigations for himself. His book fairly bristles with citations of authorities. In spite of that, he is well known as an able microscopist and careful investigator.

CHILLED BROOD never made foul brood. Does any one really believe it ever did? Don't they rather hold this view? The spores of foul brood are so plentiful that they are floating around everywhere, and a lot of chilled brood is just the right soil for them to take root in, just as white clover seems to come up of itself.

PROF. COOK has me in a corner again. I never thought of there being any difference between sugar syrup fed in fall and in winter. So I must agree that good honey may be a safer food to be given in winter than sugar syrup. But another question comes. If we feed 25 lbs. of syrup in 24 hours, have the bees time to digest it before storing it?

CHEAP WATCHING. Instead of keeping some one watching for swarms, here's the way the *Review* reports Mr. West's plan: Clip the queen. Clear away rubbish, and a few inches in front of the hive stick in the ground, not upright, but leaning away from the hive, a branch of an apple-tree perhaps an inch in diameter and two feet long, with a few twigs at top, twigs cut back to 4 or 6 inches. Swarm issues, queen climbs stick, returning swarm clusters with her, and stays till hived.

A NEW CROP of *noms de plume* is coming on. I'm sorry. *Noms de plume* used to be rather common, but they had about all died out, and I'm sorry to see them revive this side the water. In a specific use, a *nom de plume* is all right; but when a man writes as a bee-keeper it's more useful, to say the least, to see him use his



every-day name. The word of A. I. Root, carries more weight than that of "Novice," and "Rambler" always looks out of place in the Question-box.

BROODLESS BEES are better in February, Woodchopper, because—well, because. I never saw a case of spring dwindling without much advance in brood-rearing. They're quieter without brood; and if they breed in February they will not keep so quiet till the first or middle of April. Raising brood is work, and it isn't *natural* for bees to work without flying. Yes, I know "Nature sets queens to laying shortly after Jan. 1, sometimes sooner," and then Nature sometimes sets those same bees to getting the diarrhea, dwindling, and so on.

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## GENERAL CORRESPONDENCE.

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### DIVISION-BOARDS WITH RUBBER EDGES.

MR. JULIUS HOFFMAN TELLS HOW TO RAISE A SURPLUS OF QUEENS WITH LITTLE LABOR AND EXPENSE.

In my last article I did not mention the difference between the two rubbered boards in the hive I sent you. The one board that has the rubber edges only part way down is a spacing-board for general use; and the other, with the rubber on three sides, so as to fit the walls and bottom of the hive, I use for a dividing or separating board. Whenever a colony has to raise a queen, all I have to do is to place one of these dividing-boards between the frames, as near the center of the hive as the entrance of the hive will allow it, and I have two small separate colonies, in each of which a young queen can be raised with hardly any extra trouble. The advantage of this management is easily understood. If one half of the colony fails to raise a perfect queen, the other half most likely will; or, if either side succeeds in getting a good fertile queen, we have a spare one which can be used elsewhere; or, if not needed, we have the choice of the two queens, and destroy the one not wanted.

#### HOW MR. HOFFMAN DIVIDES A COLONY.

In dividing the colony, the tops of frames will, of course, have to be covered, so that the separated bees can not get together. I use a heavy enameled cloth for this purpose. An extra entrance, which I make at the rear of the hive, as you will notice by the hive I sent you, is, of course, needed. This entrance should not be exactly opposite the front entrance, or center of the hive, but a little to one side, so that the separating-board can be inserted between the front and rear entrance. When dividing the colony the rear entrance is opened and the hive is turned half way round, so that the now two entrances are to the right and left of the positions formerly occupied by the front entrance. The flying bees will in this way divide up without any trouble. After uniting the colony again, the hive is turned round once more to have the entrance as before dividing, and the extra entrance is closed.

In hives where the frames run the long way, as is the case with most of the hives used at present, the extra entrance for dividing had better be made at one of the sides of the hive, right or left from front entrance, in which case the hives will, in dividing, have to be turned only enough to make part of the flying bees enter the side entrance. A 1¼-inch hole, bored with a center-bit, will suffice for this temporary

side or back entrance, which can, after uniting the colony again, be closed with a plug or slide. Should the divided colony be strong enough to need a surplus arrangement, then we can give the one half of the divided colony less of bees and brood, and cover the frames of the other and stronger half only partly or not at all, to give passage to the super. In general I use only such colonies for the purpose of separating to raise queens that are not so strong as to need any super, as I get enough young queens by using only a certain portion of the colonies for this purpose. In uniting again, a separated colony, after removal of one of the queens or queen-cells, the separated bees should get acquainted before taking out the division-board. I do this by partly raising the covering of frames of both divisions, and leave them so for a few days, or not longer than a week's time; then after removing queen-cells, if any have been built again, take out the separating-board, shake most of the bees from the combs to get them mixed, and use the smoker on the bees freely.

Before I close I will mention another use I make of these rubber-edged separating-boards. When it happens that I am prevented from working an apiary in time to cut out queen-cells, I often find young queens already leaving their cells, or just ready to hatch. In such a case, if I have use for queen-cells or queens just hatching, I can in a few moments separate the combs having queen-cells or queens on them, by putting between the frames of comb as many boards as are needed, or put some of these frames, bees and all, in another empty hive, with boards between. In this way, when covered and kept in a shady place, the separated queen-cells and queens can be saved and used as wanted during the day. It will be found an advantage to leave a certain number of the separated colonies, containing two queens, until fall, or even to spring, as some queens may be wanted to repair queenless colonies. In a good cellar, or with good protection when outdoors, they will winter as well as when not divided. In the winter of 1882-3 I put into winter quarters 75 of such divided colonies, containing 150 queens. They wintered so well that I lost not one; and when warm weather came I took out from all the strongest double hives one queen with her bees and combs, and built them up to good colonies.

In summing up I will say, that, although the dividing of a colony within one hive to raise extra or surplus queens is not a new idea, yet it is certainly of use to practical bee-keepers, and we ought to find out the best and simplest method to do it. I have used the rubber-edge separating-boards, as I make them, for many years, and have found them useful and durable. Separating-boards without a rubber edge are not practical. They either work too loosely or are too tight, are glued fast too much by the bees with propolis; and as the boards of the hives shrink, swell, or warp, they would not be reliable in preventing bees from passing through. JULIUS HOFFMAN.

Canajoharie, N. Y., Jan. 14.

[In order that the reader may more fully understand, I will ask him to turn to page 367 of our last issue, for a cut of the separating-board, with its rubber edges. This board has been adapted to the L. size. The rubber is simply a kind of packing used for water-pipes, about  $\frac{1}{16}$  thick, and in long strips about  $\frac{1}{2}$  inch wide. Its manner of insertion is shown in the cross-section, in the cut referred to, on page 367. From experience, I know that a division-board that fits tight, or nearly so, to the inside of the



hive, is not easily removed after the bees have propolized things down solid. A division-board that is close-fitting should have a yielding edge like the chaff division-board illustrated in our ABC of Bee Culture; or when a plain board, it should have a rubber edge, as described by Mr. Hoffman.

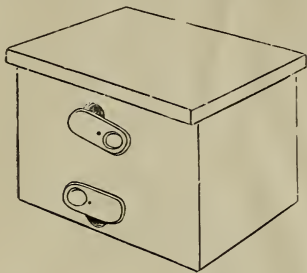


DIAGRAM OF HOFFMAN'S HIVE.

In order that the reader may also understand in regard to Mr. Hoffman's entrances, I here reproduce an outline drawing, showing the hive-entrance, and the manner of closing the same with a wooden button. One end of the button is left solid, and the other has a hole (covered with wire cloth) the size of the entrance. When Mr. Hoffman is ready to move his bees he drives a little smoke in near the entrance; and after a sufficient time has elapsed for flying bees to return, he goes around and revolves the wooden buttons so the wire cloth covers the entrance. You will remember that he does not have to fix up his frames. By simply revolving the button he is ready to load the hives on the wagon. He assured Mr. Elwood and me that these buttons gave sufficient ventilation. Mr. Hoffman's hive has a fast bottom, and the cover telescopes over the top, and rests on cleats nailed on around the hive, just far enough from the top edge to leave a bee-space above the frames. It is not shown correctly in the diagram, but you will get the idea.

Mr. Hoffman, above, has not explained the use of the upper entrance; but I will state that, on the rear of the hive sent us, there is another entrance with a button, as Mr. H. explains. The plan of forming nuclei by the use of division-boards is a good one, and is similar to one practiced by neighbor H. on the Dovetailed hive. By a slight modification of the bottom-board the same result may be attained. Mr. Harrington says he is pleased with that method of raising queens, and he raises for us a great many during the season.] E. R. R.

### THE PALM-WEEVIL.

PROF. COOK TELLS US ABOUT THEM.

Mr. C. G. Ferris sends me this, one of our largest American snout beetles, or weevils, which he says he took from a comb in a hive in his apiary in Florida. He further states that it was sucking honey with its elephant-like trunk. Mr. F. concludes with the request that I tell all about this insect in GLEANINGS.

This is really a very interesting occurrence. I have never before heard of this or any other weevil, or even beetle, that had an appetite for honey, which upon occasion it sought to gratify. This huge weevil is common in the Gulf States, and I should be glad to learn whether any other of our Southern bee-keepers have noticed this peculiar habit. The form of this interesting weevil, and the peculiar coloration,

are well shown in the figure. The snout, thorax, and an irregular line on each wing-cover, are dark red, while the base of the head, a narrow border and two spots on the thorax, and the main portion of the wing-covers, are black. The wing-covers are truncate and abbreviated behind. The exposed portion of the abdomen, just behind the wing-covers, is red, while the tip is black. Beneath, the red and black are about equal in extent, and the black is dusted with a whitish bloom. The antennæ are elbowed, and project from the snout near its base. The beetle is  $1\frac{1}{4}$  inches long, from the tip of its abdomen to the tip of its snout.

The grubs of these weevils are footless, and work in the palms. The long snout, or proboscis, of weevils, and the footless condition of the grubs, are important characteristics of members of this family. The plum-curculio, wheat-weevil, and acorn-weevils, are other examples of this large and interesting family of insects. Several of this family are borers, and are no slight pests.

This species — the palm-weevil — bores in palms. It is known in science as *Rhyncophorus cruentatus*, Linn. I find it varies greatly. Some in our collection are wholly black, while nearly all have wing-covers that have very little or no red. This one shows the rich mahogany red in abundance, and is really very handsome. I am specially pleased to secure



THE PALM-WEEVIL.

this specimen, not only from its beauty, its wide variation from the others in our collection, but most of all from its peculiar habit of banqueting on the delicious nectar of the hive. I shall be very glad to hear whether any one else has noted this habit, and shall be very much pleased to receive other specimens. I do not think the habit is sufficiently pronounced to make it especially mischievous. The insect is very hard, and I can readily believe it would be little disturbed, even in a bee-hive or hornet's nest. Indeed, I found it quite difficult to pass a large insect-pin through its hard crust.

Agricultural College, Mich.

A. J. Cook.

## MANUM VISITING H. B. ISHAM.

## BEES AND CHICKENS.

"Good afternoon, Henry. I have come over to look after the bees, and see your 500 chicks, and have brought Mr. H. B. Warner with me for a ride."

"Well, gentlemen, I am glad to see you, and will show you the chicks with pleasure. Manum, I have been thinking for the past few days that I would go over and learn your new way of caging queens to prevent swarming. But here you are, and I hope you will favor me with your new method before you return."

"All right, Henry, I will. How have the bees wintered here?"

"Very well indeed. I have lost but two out of 48 colonies. All are strong, but rather short of feed. I am determined to crowd the feed to them this spring, to induce brood-rearing all I can."

ciently, and consumes only 35 lbs. of coal in 24 hours. It is done with hot water conducted in pipes the whole length of the building under this walk in the center."

"Well, Henry, I should think you had things well arranged for this business. These chicks certainly seem to be contented without a mother, and it seems so strange to me that they should thrive so well without the old hen. And now let me tell you that I think I have caught on to something new by coming over here. You know that Mr. Ira Barber advocates a warm place in which to winter bees. Now, why couldn't you have a cellar under this building, in which to winter your bees and regulate the temperature in it with this same apparatus, and without extra expense? In this way you can have business both summer and winter—bees in summer and broilers in winter."

"Why, I had never thought of the cellar business. I wish now I had made a cellar under this brooder-house."



MR. H. B. ISHAM'S BEE-YARD, WITH HIS POULTRY-HOUSE IN THE BACKGROUND.

"I want to see the chicks. Let us go into the brooder-house. Oh my! what a lot of chickens! and all as white as snow. How nice and plump they are! Why, some of these must be large enough to dress, are they not?"

"Yes, nearly so. I expect soon to dress 200 to make room for more that will hatch in a few days."

"What breed are they? I never saw any like them. Are they the new breed you told me about?"

"Yes, they are an entirely new breed originated by my partner, Mr. Wm. N. French, of New Haven, which he has named 'The White Wonder.'"

"Henry, how do you warm this building? It can't be you warm it with this little dummy of a stove?"

"Yes, that little 'dummy of a stove,' as you call it, does the business. It is a heater made for the purpose by Bramhall, Deane & Co., of New York. This building, as you see, is simply boarded and papered, and is 65 feet long by 17 feet wide; and this little heater warms it suffi-

"Now, let us think a little further. Why not build a long narrow bee-house, say long enough to hold 150 colonies, 50 on a side, and allow them to remain in it summer and winter? Set the hives close up to the sides of the building, and make entrances through the building to allow the bees to fly out whenever they wish, the same as when wintered on summer stands, and then warm the building with one of these heaters whenever necessary; and, further in spring, when brooding commences, and we have a cold sour spell like the present unfavorable weather for bees, why, just fire up and keep the bees warm and allow them to go on with brood-rearing. In that way we could succeed nicely in getting strong colonies by the time clover blooms; and, besides, we should have less dwindling. Your brood-house here might be made with another story, and keep the bees above and chicks below. In that way one heater would do the business for both bees and chicks."

"Say, now, Manum, I am just going to try that next fall, on a small scale, and we shall



see how it works. I am glad now that you came over and gave me these points. Now, what about the caging business?"

"Yes; and let me add that, by running the bees by this caging method, they might as well be on the second floor as on the first; for there will be no hiving of swarms. Now, my way of caging is this. I take a partly filled section and put on each side of it some pieces of perforated zinc, and fasten the zinc in place with tin points, the same as I would glass. This serves as the cage. I now put in the queen and return the section-cage to its place in the clump (case), which, of course, is on the hive. You see, the bees are not queenless, and yet they can not swarm—or, at least, they won't go away when

am not there. It will be necessary to look the combs over in eight days to cut out any queen-cells that may have been started, and then in four or five days later look them over and cut out queen-cells again, and liberate the queen and remove the section-cage, for that will contain eggs. By using the zinc the bees can have direct communication with the queen; and by having a queen thus continually in the hive the colony will, I think, work better than if the queen were removed entirely, and there is no fussing to introduce queens, as she is already introduced, and we have simply to liberate her. I tried several colonies on this plan last season, and I like it better than caging the queen in the brood-chamber, for the reason that the queen is so far removed from the brood that it seems to have a greater tendency to prevent the swarming impulse later on, as none of those run in this way offered to swarm at all last year, while some of those where the queen was caged in the brood-chamber did. However, one year's trial does not always prove a thing free from failure."

"Thanks for the explanation, and I shall try it with a few hives this season. But, suppose the queen should get out through the perforations; wouldn't it cause trouble in an apiary that you visit only once a week?"

"Yes, it would; hence it is necessary to procure zinc that is just right. The zinc I had last year did not always hold the queens, therefore I shall try another make this year."

"There, Henry, I notice Mr. Warner is getting uneasy, and I think we shall have to go; but first, I want to take a view of this apiary and your chicken-house, so let's go out and see whether I can find a good position. There, I think the best place is from this corner of the yard, and you may stand down there by a hive, and Mr. Warner out here, and I will soon have you both. There, all done. We will now go. Good-by. Oh! by the way, Henry, have you heard that GLEANINGS has a new editor?"

"No; who can it be?"

"I believe his name is Leland Ives Root, born Mar. 29, 1891, to Mr. and Mrs. E. R. Root."

"Ha, ha, ha! Good! I am glad to hear the good news. The more Roots, the better. It is said, you know, that the small fibrous roots are the feeders."

"Yes, that is true; but, after all, the old matured Roots are the ones which support the trunk and keep it erect through all storms and tempests while the small ones are growing up."

Bristol, Vt., Apr. 13. A. E. MANUM.

[Friend M., a good many of us will thank you for the address of the firm that makes the little heater that does the work you mention, and takes only 35 lbs. of coal for 24 hours. Your building for the bees, if you let them fly out through the walls, is really a long house-apiary, and, if you remember, I have made extensive experiments in the way of warming a house-

apiary; so you will excuse me if I am a little incredulous. Those that were warned did not do as well as those that *warned themselves*. So I rather decided that a good strong colony, with food enough so it could generate its own heat, was the cheapest way of doing it. Such a heater, however, with hot-water pipes, so as to give a regular, even temperature, may be quite in advance of the coal-oil stove used by myself and friend Doolittle.—Thanks for your kind words in regard to the Roots.]

## NUBBINS.

PROF. COOK REVIEWS MATTERS.

I am glad that GLEANINGS is deaf to those criticisms that urge an editorial eye single to exclusive apicultural discussion. Without a doubt, the large majority of bee-keepers would vote to sustain your present course. To the few who criticise, you give more apiculture than they can get anywhere else for the money. The rest is clear gain; or, if chaff in their mind's eye, they can cast it to the winds and still be ahead. It is grand to have twice ten thousand ears semi-monthly. The man who would not be inspired by such an occasion to go beyond a narrow line of discourse would show a lack of appreciation of his rare opportunity, and the lack of aspiration, that I should not admire. To broaden out and say helpful things, and speak words that make the reader wiser and stronger and happier is good. The very success of your course bespeaks its wisdom; and so, I say, go on, though I am sure I do not need to say it. This nubbin grew out of an editorial sucker in a late bee-paper.

Chilled brood can no more give rise to foul brood than can la grippe to whooping-cough. La grippe might leave an enfeebled condition that could ill bear the shaking-up of whooping-cough, or *vice versa*. So, chilled brood may imply a weakened state that would find it impossible to resist an attack of foul-brood microbes. Chilled brood, then, may open the door for foul brood, but can never *cause* it.

The spring has opened very auspiciously. Three days of fine weather during soft-maple bloom, even more time given for the bees to extract sweets from hard maple, and now the early fruit-bloom is well out. Last night gave us a severe frost. The thermometer registered 18° F. We fear this may play havoc with the fruit crop as well as bloom, and we also dread its effect on the white clover, which is very abundant, and big with promise. Yet we hope some hidden power will make them proof against even such frigidity.

I fully believe that bees are very necessary to a full fruit crop. I hope all will notice, and see whether trees are in bloom only during a time when, from cold or storm, no bees are flying, and note the result. If no fruit sets, while on other trees which bloomed a little earlier or later, and which were freely visited by bees, a full crop of fruit is borne, we shall have an argument that will even reach our present legislators. Our intelligent fruit-men are already convinced. You speak of bees getting honey from peas not in bloom. The partridge pea, as stated in my book, yields much nectar from extra floral glands. That the cultivated pea may do the same is not strange. Such glands doubtless secrete nectar to attract bees and wasps, which serve the plants in frightening away insect pests, that might destroy the plants. This makes me bold to say that my book contains much that is found in no other one. It contains the latest science—all that is found in Cowan—



and now, all for a dollar. Should not all your many readers own and read this latest edition? Could it but be of many dollars' worth of advantage to them? If all the kernels on this last nubbin are blasted, throw it into that convenient compost, the editorial basket.

A. J. Cook.  
Agricultural College, Mich., May 5.

[Friend C., I am exceedingly obliged to you for your kind words in your opening paragraph. Such a thought from any one would make me feel glad; but it comes to me with additional force because of the weight that attaches to any opinion you may see fit to give. I am glad, too, that you have given this suggestion in regard to foul brood. An unfavorable condition in the plant or animal invites not only contagion, but various insect and fungoid foes. How often, when we think something is new, somebody reminds us that it is already mentioned in Cook's Manual! And I do think that all bee-keepers who are not in possession of a copy might now, at least while the price is only a dollar, have one for a convenient handbook.]

### ARE THE FOOT-NOTES SOMETIMES UNFAIR?

DR. MILLER, REVIEWS THE MATTER.

Not long ago I found some fault with the foot-notes, saying they were, perhaps unconsciously, too much given to saying smooth things; and now friend Green (p. 267) says they are too much given to saying rough things. Perhaps the truth lies somewhere in the middle. At any rate, I should be very sorry to have any thing said that would make much change in the foot-notes. They are the best part of GLEANINGS. Right or wrong, the editor of a bee-journal is supposed to have more than the average amount of knowledge as to bee-lore, and it is always interesting and often instructive to have the views of more than one on any given subject.

Suppose two bee-keepers, Brown and White, are both men of judgment and experience, and Brown is talking about something that you are interested to learn, how natural it is, when he stops, for you to turn around and say, "White, what do you think about that?" So we like to turn to the editor, and say to him, "What do you think about that?" and we expect our answer in the foot-note. If Brown is talking about a thing over which he is somewhat enthusiastic, it is quite natural for him to paint it somewhat rose color, forgetting to mention objections, and then it is the part of a faithful editor to call attention to the other side. Again, an item is given that is of such value, if true, that the attention of every one should be particularly called to it, and the indorsement of the editor gives the reader more confidence in it. I do not say that the knowledge of the editor is perfect—the number of such people is limited. But he ought to be right generally, and he may suggest a view from another standpoint.

Let us examine a little. Look on page 282. There's an item recommending glue in white-wash for hives. Now, without the foot-note some one might have all his hives covered with a wash he would regret. He is at least put on his guard; and if some one has tried glue and finds it stands the rain, you may be sure he will be heard from.

On the same page is a recipe for labeling tin—a thing that has been sought for. Two men vouch for its success, and I have confidence in it; but that confidence is greatly heightened when the editor indorses it, not only because it is corroborative testimony, but because, from

his experience in that direction, his testimony ought to be good. You see, friend Green, the foot-notes are not all fault-finding. On the same page is another that is fault-finding. A correspondent asks a trial of queen-excluding top-bars. The editor sits down on it very gently. I think if friend Green or I had been there we would have said, "That thing has been tried, and you'll only fool away time on it." The foot-note, gentle as it is, may save disappointment in more than one case.

No, friend Root, don't repress the foot-notes, whatever else you do. Rather than that I'll take back all I said, and allow you to swing your hat, and sing out "Hurrah for our side!" at every favorable report that comes in.

### SHALL THE N. A. B. K. A. AND B. K. U. UNITE?

Friend France, p. 166, asks me to explain how the Union would be benefited by the union. His opposition to it, indorsed by E. R., makes me a little doubtful. Perhaps the disadvantages preponderate. I'll try to tell the advantages, and may not find them so many as I had supposed. The first one that suggests itself is the opportunity for an annual meeting. I know that friend France says the Union doesn't have to meet anywhere to do its business. But that is just because it can't very well do so, however much the advantage might be. At least once, I think, it has had a meeting, and that was at a meeting of the N. A. B. K. A. The business is done mainly by the manager, but he sometimes consults with the other officers, and I feel sure that he would be glad to do so oftener if it were not for the fact that all consultations must be by mail, without the opportunity of a personal meeting. In a late number of the *American Bee Journal* the question is raised (page 481) whether the Union can not do some work that the manager can not do without a change of its laws. The question as to the advisability or non-advisability of the particular case mentioned does not now concern us, but it is entirely in the range of possibility that some change or some action might be needed that would be the better for close personal discussion.

Then there is some advantage in the way of enthusiasm to be had from a personal meeting. I think that friend France will testify that the Union got a pretty good lift from the presence of the manager at Madison at the Wisconsin convention. If I am not mistaken, the members of the Union are much the same from year to year—that is, a man who joins once is likely to renew his membership the next year. Now, suppose that the two societies were united, how many new members would the Keokuk convention have brought into the Union? I don't know, but I think fifty would be a pretty safe guess. And each year the N. A. B. K. A., from its wandering character, might do the same. Don't you think that would be quite an object? Might it not be a benefit to the N. A. B. K. A. to consummate the union? It would certainly do something toward giving it stability of character, a thing it very much needs. At present there seems to be a union in so far that the reports of the Union are presented at the annual conventions of the N. A. B. K. A.

Haven't I shown at least some benefit to be had from the combine? Now please tell us what harm would come of it. C. C. MILLER.

Marengo, Ill.

[We try, friend M., to make our notes fair, but I fear that we do not always do it—not from a disposition to be unjust, but because of a lack of knowledge sometimes; for, as you say, editors are fallible. I am glad you have taken up the other side, particularly as the foot-notes you commend were by me. I won't get conceited

about it, but try the more to make them free from criticism. I am now reading up the back volumes of the old bee-journals, in order that I may be posted in what is new and what is old, and what has been tested and found wanting, and what has been tested and found to be good. In regard to merging the Bee-keepers' Union into the N. A. B. K. A., I have to acknowledge that I am converted to your position; in fact, Mr. Newman says the Union is part and parcel of the N. A. B. K. A., so far as its protective care is concerned.] E. R. R.

### THE HOME TALKS IN GLEANINGS.

ESPECIALLY THE ONE FOR APRIL 15.

Mr. A. I. Root:—Permit me to find a little fault with the Home talks in GLEANINGS. I have been a reader of your journal for several years, and have been an admirer of its moral tone and of the sermons; but through all there runs a vein of what I have often heard called "egotism." This seemed to mar the value of the otherwise excellent discourses; but true philanthropy seemed to be back of all this, so we did not care to complain. But after Mr. Braley complains so vigorously, you seem to get "riled," and say harsh things, or, rather, *allow* others to say them, and then you publish it with your approval. In this way you manage to say that Mr. B. is "another" (egotist), and that you suspect he doesn't know much, and you have lots of friends *any way*. Now, if this came from a man who swears, like ———, for instance, it would not do much harm; but coming from a Christian *teacher*, it is highly pernicious. The apostle cautions us to avoid all appearance of evil, that the gospel be not spoken against; but you rail at Mr. B., and send it to 10,000 readers (if GLEANINGS is lent everywhere as it is here, there are nearer 30,000), so you can see how much harm it *may* do. In reality Mr. B. does not show egotism by his refusal to take a thing he *doesn't like*; and Mr. Woodbury is plainly wrong in his remarks.

You have no doubt read in Pilgrim's Progress of how Christian and Hopeful followed Flatterer in a path apparently straight at first, but turning by degrees till they traveled in the opposite direction. I do not say that your friends *mean* to flatter you; but the dangers that Bunyan pictured still exist.

Now, please do not think that this is written in a spirit of hostility, or is prompted by jealousy. We envy no man prosperity. After all, the question is not, "What are the motives of this?" but, "Is it true?" A SUBSCRIBER.

Permit me to thank you, my good friend, for your kindly and just criticism. You are right in the position you take, that friend Braley has not been fairly treated. The same is also true of that California association. Why, then, was it permitted to go into print unnoticed? Simply for the reason that I could not, in one paper, take up all these side issues. I started out with a text and with a particular point to make. The point was, that we should have more faith in the Scripture injunction to return *good for evil*, and that we should not be troubled when we are criticised or persecuted; and I certainly made a strong point, and a helpful one, for the letters I have received indicate clearly and unquestionably as much. Now, had I, at the same time, taken up this point you mention, it would have diverted the thought of my readers from the great moral I wished to make, and it would have weakened the effect of my talk. The kind letters I quoted were *simply* to show that I had not suffered in public opinion or public estimation by what friend Braley had said. I did not mean to carry the idea that the writers of these kind letters were entirely right. I knew they were prejudiced in *my* favor. I rather hoped the readers of GLEANINGS would recognize this without the necessity of my taking space to correct it. I told you, in that same paper, that one of my besetting sins *was* egotism before the grace of God toned down one of the great defects of my character. I well knew I was laying myself

open to the charge you make when I published these kind letters; but how else could I show to the world, or to our boys and girls, that, if *their* hearts are right in the sight of God, they need not trouble themselves to fight back. The point was this: Do *good* to those that hate you, and at the same time fight the evil in your *own* heart, instead of fighting those who have persecuted or criticised you. I surely was not "riled," as you express it, my good friend; neither did I wish to call friend Braley an egotist. If it sounded so, it was a mistake on my part. I have all along had the kindest feelings toward him. I *do* know it is *exceedingly* important that I, as a teacher, should be *very* careful; and I thank you for kindly reminding me of its great importance. There *was* a time when the flatterer might have turned me from duty; but I do not believe that flattery now can swerve me from the straight and narrow path very much. If it would, God knows I have enough praise to place me in danger. I have been praying all along, and I will pray still harder, that none of these things *may* move me from the work whereunto he has called me.

Here is another letter, something in the same line. This, also, comes from a church-member, as you will notice. It is simply an extract from a very kind letter like your own:

You will pardon me if I should act the critic awhile. I, too, am a member of the church; and while I admire the way you fight the Devil in your warfare against some of the evils in the world, I admire, also, the moral tone of GLEANINGS' make-up. But the Home Papers which you publish, I do not place a very high estimate upon. I verily believe that the publication of those Home talks has been very profitable to your business, and a source of revenue to you for many years, which no doubt you have enjoyed. Those simple talks have been the means of building up your immense business. I would not have you stop publishing them on my account, as some of the good brothers were afraid you might do, who so gallantly came to your aid with their sympathies. No: when a man has found a good advertising medium, as you have found in the Home Papers, why, it would be foolish to give them up.

L. A. DOSCH.

Miamisburg, Ohio, May 9.

Dear friend D., I am well aware that the Home Papers *have* been a means of building up our business; but I assure you, from the bottom of my heart, that they were *never* written with this end in view. The result has only been *another* of the pleasant surprises I *tried* to tell you about in that Home Paper that has been criticised. You are right in your assertion that they have been profitable; but you are entirely wrong in your *conclusion* that they were written from a selfish motive. I am *not* working for money. In *one* sense I do not care particularly whether our business builds up or not. In fact, it *pains* me to see some departments enlarging. As an illustration: I feel troubled to see our advertising columns grow and expand when it is not perfectly *clear* to me that the good friends who patronize us will get their money back. If, however, the business can continue to increase and enlarge in such a way that *Christ Jesus* may *never* be crowded out of sight, and that his dear name may be *honored* and *glorified* at every *step*, then let it build; otherwise, may God forbid.

A. I. R.

### THE DUTY ON QUEENS.

PROF. COOK REVIEWS THE SITUATION.

This new tariff on imported queens is really quite a serious matter. The facts are just these: The McKinley bill places a tariff of 20 per cent on all imported animals. This, of course, includes queen-bees. There is, however, a clause



exception from the provisions of the bill—animals imported strictly for breeding purposes. This, of course, would also exclude queens, and exempt them from the duty. But there is a requirement that the importer shall have a certificate, establishing the fact that the animals are imported solely for purposes of breeding. Now, any of us who are acquainted with governmental affairs know that the amount of red tape used to keep out fraud is something enormous. No doubt this is all necessary. Thus our importers will not be prepared to show papers that will exempt the queens from the duty; and as the queens can not be left in the custom-office, all early importers will, per force, have to pay the duty. Now, I wish to suggest three practical points that bear on this matter. 1. Let every importer get at once, from the Treasury department, blanks and instructions so that he may, in all future importations, have the papers to show that his goods are exempt from duty, so that he may secure his queens from the custom-house without expense, at once.

2. I would suggest that the executive committee of the American Bee-keepers' Society, or the Bee-keepers' Union, take immediate steps to have the Secretary of the Treasury rule that queen-bees may be admitted free at once, as coming under the law, without any special certificate, in that they are *always* for purposes of breeding.

3. In case people have ordered queens of importers at advertised rates, I would suggest that each person pay this duty. It would be but little for each one, but would be very severe if the dealer had to bear it all. I suggest that each importer explain the matter to every purchaser, and I have no doubt that nine out of every ten will pay the additional amount required by this extra expense. I believe bee-keepers are just such men. I hope, Mr. Editor, you can add some word of advice to the above. I have several complaints—one very loud one—from importers.

A. J. Cook.

Ag'l College, Mich., May 9.

[We have already notified our agent in New York to be prepared to pay duty on queens, and forward them at once. This duty is not so excessive but that we think we can pay it and still maintain our old prices. The Italian queen-breeders have perfected their methods of sending queens across the ocean to such an extent that there is not nearly the loss that there was formerly, when the old price of \$6.00 for the best queens was established for the month of July. Last summer we reduced the price to \$5.00, and contemplated reducing it again; but the duty will probably hold us at \$5.00 for the month of July. It might be that we shall be compelled to raise our prices, but we do not think we shall be under that necessity.]

Since the above was written, the following letter, to Acting Secretary Willets, has been forwarded to Prof. Cook, who, in turn, sends the same to us:]

TREASURY DEPARTMENT,  
OFFICE OF THE SECRETARY,  
Washington, D. C., May 5, 189

*The Honorable, The Secretary of Agriculture:*

Sir:—I have the honor to acknowledge the receipt of your letter of the 22d ultimo, and, in reply, to say that, under the existing tariff act, I can perceive no way in which imported bees can be admitted free of duty when intended for breeding purposes, except upon production of the proofs prescribed by paragraph 482 of the "free list," with the character of which you are familiar. Bees, or other dutiable articles imported by mail from countries with which the United States has no parcel-post treaties, are liable to seizure as illegal importations; but, under the authority of remission conferred by law on the Secretary of the Treasury, collectors of customs may release the seizure on payment of duty and expense of seizure,

when the duty is \$25 or less, and where there is no proof of willful evasion of law or postal treaty. The provision for shipment of queen-bees by mail, contained in rule 100, page 798 of the Postoffice Guide, cited by you, is understood by this department to relate to the domestic and not to the foreign mails, inasmuch as, under the Postal Union Convention, the only dutiable articles which may be imported by mail are printed matter, commercial papers, and samples of merchandise. Respectfully yours,

CHARLES FOSTER,  
Secretary.

[Prof. Cook adds:]

*Friend Root:*—This seems to give us but little hope. The thing to do now is to find out just what course to pursue to get relief from duty.

A. J. Cook.

[You, friend Cook, if we are not imposing on you too much, are just the man to secure that relief, as you have a friend in court in the personage of the Secretary of Agriculture, Edwin Willets.]

## THE NEW WATER CURE.

SOME EXTRACTS FROM THE WATER-CURE MANUAL, PUBLISHED IN 1847 BY FOWLER & WELLS.

In addition to what we have already taken from this book, I have thought best to give also the following, from Chap. IV. The Water-cure Library comprises seven volumes. The extracts we make are from Vol. IV.

### THE ENEMA, CLYSTER, INJECTION, OR LAVEMENT.

This very important part of the water cure is as old as the healing art itself; but in the endless complications of the remedial means of modern times, almost any irritating or disgusting fluid, other than pure water, is preferred. A variety of instruments for administering injections are now manufactured, varying in price from fifty cents to four or five dollars. The cheaper kinds, if well made and used with some degree of dexterity, answer a good purpose. Every person should have access to one; no lady's toilet is complete without it. Contrary to the common notion, a person, by the exercise of a little skill, can easily use this remedy without assistance. It is in no wise painful, but decidedly agreeable, and affords, in a variety of complaints, speedy and efficient relief. Thousands suffer incalculably from constipation year after year, when the use of this simple means would give the greatest relief, and thousands more are in the daily and constant habit of swallowing cathartic and aperient drugs, Brandreth's pills, castor oil, magnesia, blue pill, mercury, and so through the long chapter, that irritate and poison the delicate coats of the stomach, and exert their pernicious influence throughout the numberless lanes and alleys of the system, destroying the healthy tone of the tissues, deranging the nerves, and thus causing a state of things incomparably worse than the disease itself, and rendering even that more and more persistent.

Most persons may and should use this remedy cold. A beginning may be made with the water slightly warmed. In obstinate cases, lukewarm water effects the object quicker and with greater certainty than cold. But, invaluable and efficient as is this remedy, let no one persist in those habits of diet, such as tea and coffee drinking, the use of heating and stimulating condiments, greasy and concentrated forms of food, etc., that tend so certainly to constipation and irregularity of the bowels.

In all forms of looseness of the bowels, as diarrhea, dysentery, cholera morbus, cholera infantum, and the like, this remedy is most excellent. In many a sudden attack, injections sufficiently persevered in, will suffice quickly to correct the attack, and this when, in the ordinary treatment, a course of powerful drugging, would be deemed indispensable, that would result perhaps in death.

So also in constipation and obstructions of the bowels; when no powerful cathartics that any one dare venture to exhibit can be made to act, this simple remedy is effectual in bringing about the desirable object. In any of these cases, if there is debility, and especially if it be great, whether the patient be



young or old, the water should be of a moderate temperature—not above that of the blood (95° F.) nor very much below that point. Even if there is high inflammation and much heat in the bowels, water at 90 or 95°, persevered in, will readily bring down the temperature of the parts to a natural state, as may be determined by placing the hand upon the abdomen. The patient's feelings of comfort as to warmth or cold are a good guide. With these precautions as to temperature, etc., the injections may be repeated for an hour, or even hours upon the stretch.

In attacks of colic, clysters are used much. In spasmodic colic, I believe, it will generally be found best to use them quite warm. In wind colic, the enema is highly useful. Vomiting as well, and some other means, as is shown elsewhere, should be brought to bear. Some cases are very obstinate, and require all the skill of the most experienced practitioner; yet I advise all persons to persevere; in bad cases you can not make matters worse, and will generally succeed if you do not falter by the way.

In fainting fits, and in hysterical symptoms, the injection is serviceable. If there is much debility, care must be taken that the water be not too cold; but generally the colder it is given, the better. In cases of cholera infantum, when the infant is already past recovery, I have known tepid injections, frequently repeated, give, apparently, much relief; and it affords satisfaction, when nothing more can be done, to be the means, in some degree, of smoothing the passage of these innocent sufferers to the tomb.

Injections to the urinary passages, and to the vagina and womb, are useful in all acute and chronic affections of these parts. The water should generally be used cold. Various instruments are constructed for these purposes. In piles and hemorrhoids, of whatever kind, injections are indicated. Recent cases are often cured with wonderful rapidity; and, in any case, those who have been long troubled with these complaints (and it would seem that about one-half the number of adults who lead a sedentary life are thus troubled) will find that simple, pure water is incomparably better than any of the thousand-and-one nostrums so much in vogue at this day. In a majority of these old cases, however, no local application will accomplish much, alone. The local symptoms only indicate the diseased condition of the whole alimentary canal, as well as considerable derangement of every function of the whole system. Hence the treatment must be general, and often powerful and long continued; and it may appear singular that the disease may be made apparently worse by this treatment, before it can be cured. It likewise sometimes comes on as a crisis, where it never had existed previously. In all of these cases, cold injections are good.

We give also the following testimonials:

#### A BAD YEAR WITH THE BEES: THAT WATER CURE.

I have been unable to do any manual labor for nearly one year; and my bees, from 63 colonies, have dwindled until I am afraid that I shall not have 20 colonies left. Last spring my bees never looked more promising, and I fed them 300 lbs. of honey, hoping to reap a benefit; but, instead, I got no swarms and no honey; and being unable to earn any money, it left me in poor shape for the winter.

As my grandfather was brother to Dr. Shew's mother, I happen to know of many of his astonishing cures, and so I readily take to the new remedy. I am troubled a good deal like L., mentioned under "Throw Physic to the Dogs," in April 1st GLEANINGS, and I am positive that I am receiving benefit in many ways; and the strangest part of it is, I have been greatly troubled with catarrh for 18 or 20 months, but have been perfectly free from it since the first application of the new remedy. Our Methodist minister received one of Dr. Hall's books, complimentary, with the request to sign and return obligation, but he said he thought it his duty to pass it around among his friends; so you see we have the original, as well as your notes and suggestions.

ISAAC T. GOULD.

Corunna, Shia Co., Mich.

[On receipt of the above we wrote to friend

Gould, telling him that he must give us what facts he could in regard to Dr. Shew and his treatment. He accordingly sends us the following:]

#### FURTHER STATEMENTS IN THE WATER-CURE TREATMENT.

Dr. Joel Shew, originator and proprietor of the great water-cure establishment at Oyster Bay, near New York, was an invalid son of Godfrey I. and Betsey Shew, of Jefferson Co., N. Y. His mother was the sixth child of Abraham and Desire Beecher, distant kin of H. W. Beecher. Whether his ailments were the cause of his commencing the study of medicine and physics, I do not exactly remember; but as the usual prescriptions of medicine failed to have the desired effect with him, he went to Oyster Bay to try the effects of the sea-breeze and salt-water bathing. Thus from personal necessities he commenced the study and practice of a course of diet—bathing, exercise, and the use of external friction, which, from the good effects produced, helped to build up an establishment that, in a few years, numbered its patients by the thousand.

Dr. Shew was very methodical in his business, and wanted no half-way work in any of its operations. All baths, exercises, and friction, which were done with crash towels or flesh-brushes, had to be done thoroughly and with a vim. Hot water and friction were used for very weak or aged patients, and cold water and exercise for the young, who had plenty of nature's electricity. Graham and fruits, variously prepared, formed the basis of the diet of his patients, and he wanted them to use no highly seasoned nor rich greasy victuals of any kind.

A wet-sheet pack was his favorite remedy in nearly all acute diseases; and a shower or plunge bath, followed with friction and gymnastics, in chronic cases. In a wet-sheet pack, the patient was wrapped from head to feet in sheets wet with cold water, and then covered with flannel blankets until a reaction and sweat were produced. In any event, a health-glow and moisture had to be brought to the surface of the skin before the treatment was ended. He preferred rain water for all uses, and had cisterns especially filtered and cleansed for drinking-purposes. His cisterns and wells were all thoroughly ventilated, and he would not willingly use water from a well or cistern where ventilation was neglected.

He always varied his treatments with hot or cold water, both internally and externally, according to the requirements of the case in hand, and was always very particular about his after-treatments.

I have seen cases which had baffled the skill of physicians, and withstood years of pickling with drugs and medicines, without an improvement, and which seemed hopeless cases of disease, that, in the space of six or eight months of the genuine water-cure treatment, have been transformed into perfect specimens of bodily health and vigor. I do not remember the date of his death, but I think it was in the '60's.

Corunna, Mich., May 11. I. T. GOULD.

#### WATER CURE WITH A VENGEANCE.

*Friend Root:*—In 1836 I was in St. Petersburg, Russia, where the water-cure was a craze. In the month of December, in zero weather, ice being from two to three feet thick, large holes were cut every morning in the bath-houses situated on the ice in the river Neva. Then we took a plunge for a minute or two, and wrapped ourselves in our furs. It was refreshing; and, what an appetite for breakfast! Then, again, in the summer we went into the country to an

artesian well and there partook of inward cleansing. We always tried hard to see who could drink the most. We never stopped with less than ten or twelve glasses (holding about a pint). One day I beat the large crowd by drinking 14 glasses in two hours. In 1839 there was a similar hydropathic craze in Germany, but more moderate than in Russia; but yet I took many baths in winter in the river Spree. The water cure was recommended for rheumatism, fevers, etc. In regard to eating linseed, why, friend R., I am somewhat surprised. Flaxseed tea is quite a common thing in my native country (Russia). The seed is boiled for two or three hours, then strained; and sweetened, if for cold, with honey or sugar; then add ginger, nutmeg, cinnamon, or any other essence, to taste. It is excellent for colds, coughs, and dyspepsia. It will set the stomach right. Even for infants' ailments it beats many of the nostrums sold at high prices; and, when properly prepared, it is pleasant to take. Try it, but don't eat the raw seed, which is good enough for cattle; but even then the oil is better. P. C. BLUMH.

Smithville, Tenn., May 4.

"RENDER UNTO CÆSAR THE THINGS THAT ARE CÆSAR'S."

Do not be too hard on Dr. Hall. If he had not revived Joel Shew's recommendation, it might have lain dormant another quarter of a century as it has the past one. I have the book, and read it years ago; but it was laid away and almost forgotten, and I thank you and Dr. Hall for reviving it again. A revival is often very beneficial, sometimes, even in religious affairs. THOS. A. MASKELL.

Harmersville, N. J., May 11.

[All right, friend M. I will try to have more charity. One summer, some years ago, I was complaining that my feet were so sore and tender that I could hardly stand it to walk around. A runner for some kind of goods happened to be in the store, and remarked as follows:

"Mr. Root, if you will wash your feet as often as you wash your hands and face, your troubles in that line will be ended."

I thanked him, and began straightway to wash my feet every night and morning; and I found it an excellent plan, during hot weather in summer, to go around on the lawn barefooted, while the grass was covered with dew. Now, this man did me a great favor. Perhaps it would not have been a bad investment if I had given him \$4.00 for the information, and he might have called it a discovery of his.\* Is not this a parallel case? and would it be right or Christianlike for somebody to charge \$4.00 for a secret or discovery that consists simply in washing your feet as often as you wash your hands and face? I suppose the matter has been discussed enough already, only that Dr. Hall is now at this very moment taking money from people who do not read the papers, wherever he or his agents can hunt them up.]

THE WATER CURE FOR PAINS IN THE SIDE.

"Thanks for your pamphlet. I have great faith in your remedy. If you will send some to my address I will see that they get to people I think they may benefit. A neighbor sent for me in great haste. One of the family was taken suddenly with what they thought was pleurisy, suffering great pains in side and bowels. I urged them to try hot-water enemas, with a little soda dissolved in it, using the common syringe. It brought entire relief in a very few minutes. I think pleurisy, inflammation of the

bowels, and a great many other troubles, could be cured by using hot-water enemas, and hot-water compresses outwardly, covered with dry flannels. I know it will cure inflammation of the bowels every time if persevered in.

N. Royalton, O., Apr. 16. MRS. O. M. KEYES.

THE NASAL DOUCHE—A CORRECTION.

Friend Root:—I see I got a bad mistake in "Water Cure for Nasal Catarrh," page 328. I said, "Breathe through the nose," when I should have said, through the mouth. Press the little nozzle against one nostril, and hold the palate of the mouth firmly against the roof, so the water can't go down the throat or into the mouth. Done thus, there is no danger of strangling. I am very sorry it got in wrong; for if any one tries it that way he is sure to get strangled. Put a teaspoonful of salt to a pint of warm water, and it will feel pleasant; but without the salt you can't stand it. You would think the top of your head was blown off.

Venice, Fla., May 1, 1891.

J. H. HILL.

SIMPLICITY AND CHEAPNESS.

Accept thanks for the little book on water cure. You seem to be in some trouble about the stiff rubber piece at the end. I use a large goose-quill pushed down into the rubber hose. Push the quill entirely down, so the hose will cover it at the end, and sort o' pucker over it. The quill does not obstruct the flow of the water. For a nasal douche I use the same with a little cotton rolled round so as to plug up the nostril. WM. WASON.

Rockdale, Texas, May 9.

WITHOUT MONEY AND WITHOUT PRICE.

A few days since, when I was in a little village I heard a lady, an acquaintance of mine, who has poor health, telling another afflicted sister of a wonderful cure for human ills. She dwelt largely upon its merits, and said she would give her friend the address; and if she would send \$2.00 she could obtain full directions. The treatment was simple, but she did not feel at liberty to tell what it was. I interposed at this point, and asked if it was Hall's hot-water cure. The lady looked at me in amazement. I believe that for the moment she thought that I too was a disciple of Hall, and had fallen from grace, and was revealing secrets I had promised to keep. She did not answer. I asked her if she knew Mr. Root, of Medina, and if she read GLEANINGS. She knew neither one, strange to say. I then told them both how you were exposing the water secret, and the other lady went home well pleased in possession of both water cure and \$2.00. SUBSCRIBER.

GOLDEN ITALIANS.

ARE THEY LESS HARDY THAN THE THREE-BANDED BEES?

In an editorial in GLEANINGS, April 15, you speak of the "yellow five-banded bees" dying in such a way that many people would infer that they were less hardy than the three-banded or leather-colored Italians. I have had five or six colonies with a strain of the "yellow five-banded bees," on trial the past three years, and during all this time they have been numbered among my very best colonies in regard to wintering and building up early in the spring. They are less inclined to rob, and are gentler than any three-banded Italian bees I ever saw. The past three seasons have been poor honey seasons, but they have done as well as any other bees I have—better than the Carniolans. If I remember aright, they are descended from a queen procured of Mr. G. M. Doolittle, and no

\*Wading through the dewy grass is a discovery of mine—a discovery in "water cure."



one questions the fact that his bees are good workers.

#### SLIDING ON HIVE-COVERS.

On page 303 Mr. E. France objects to "sliding" on hive-covers, on the ground that it rolls the bees up in bunches, and kills them. My experience has been, that, if the cover and top side of the honey-board are free of burr-combs, and the cover be held squarely down on the hive, there need be no bees killed; but if you have to raise the cover a trifle to let it pass over a bit of burr-comb, the bees will crawl under the cover on the ends and side of the hive, and then, if the cover be closed down, it can not fail of killing bees.

ELMER HUTCHINSON.

Rogersville, Mich., April 20.

[I did not wish to convey the impression that all four and five banded bees were less hardy than the darker Italians, but that those *we* had were so. What you say regarding the sliding cover is correct, according to my experience. When we had burr-combs we scraped the cover and frames after the honey harvest, so as not to be bothered with them the rest of the year.]

E. R. R.

#### CADDICE-FLY LARVÆ.

##### "BOOKS IN RUNNING BROOKS."

Prof. A. J. Cook:—While out on a ramble today we sat down by a small creek to rest, and noticed something crawling about in the bottom of 2 to 4 inches of water, that looked like rotten twigs with the bark peeling off. On examination we found larvæ in them, and inclose some to you. Please tell us what they are, their habits, and how they live, through GLEANINGS or by letter, as you wish. GLEANINGS TYPOS.

Medina, O., April 26.

[Prof. Cook replies:]

In the early springtime—April and May—the ramblers, whom love of nature causes to lie prone on some bank of brook or pool, and look at the thousand wonders that nature there reveals, will often see a strange twig-like or gravel-formed tube which will seem to move along of its own will. He is likely to conclude that inanimate things may move, unless, forsooth, he is more curious, when he will find a very animate cause of the motion. This is a worm-like larva, with six strong legs just back of the head, by use of which the insect pulls itself and its strange home along through the water on the bottom of the stream. The tube which surrounds this aquatic traveler, and which doubtless preserves it from hungry fish and tadpoles, is made by the larva. These tubes are fashioned by gluing sticks and stones together. They are usually cylindrical, but they may be made of stones, and be more curious, as they are often the form of a snail-shell. Often silken threads help to hold the pebbles in place. Two hook-like legs at the tail end of the body serve to hold the insect in its tube, so it is very difficult for a fish to get the larva, unless it is willing to take tube, web, and all. These larvæ are nearly transparent, so we can see the heart, along the back, nerve system along the under side, and the air-tubes along the sides. Thus these may be used to study the internal organism of the insect.

The mature insect of this larva is called the "caddice-fly." Its wings are thick and paper-like; and when the insect is at rest they are roof-like. The legs are rather short, and the antennæ are nearly as long as the body. Some are variegated, and are quite pretty. They are attracted by lights, and so they often come into our rooms.

A. J. Cook.

Agricultural College, Mich., April 29.

#### CLOSED-END FRAMES.

##### INTERCHANGEABLE; NOT STUCK IMMOVABLY WITH PROPOLIS.

The first lot of bees I bought when I came here were in closed-end frames with an outer casing, leaving a two-inch space all around. After using such hives for a year I found there was no trouble with propolis, nor in interchanging the frames, and that they were almost as easily handled as the swinging frames; though, out of mere habit, I can find a queen a little quicker. I think, among the swinging frames; but the use of such frames for fifteen years might explain the difference. In the spring the colonies on closed-end frames were the strongest. The only objection I found was, that the air-space was a harbor for insects, and especially scorpions. As I would rather have bee-stings, ten to one, I discarded the closed-end-frame hive for one of my own make, a pet hive.

#### SNAKES.

GLEANINGS can not be too "snaky" for me. The professor has certainly given us a very valuable article on snakeship. The habits of such a dreaded enemy must be known in order to fight its terrible bite, and save those that would otherwise die every year from its effects. As to a snake swallowing its young at the approach of danger, there can be no doubt of it. The œsophagus has the power of expanding, affording the means of swallowing an animal much larger than the body of the snake. A snake will also swallow its young for the night, and, before being killed, in the dying act will give them up. After a protracted rain a rattler can't emit the rattling sound as usual, his rattles being too wet. In this section the ground-moccasin is to be the most dreaded, as it gives no warning note.

J. B. LA MONTAGNE.

Winter Park, Fla., Apr. 22.

## LADIES' CONVERSAZIONE.

##### THE FLAT COVER: "E. R. R." AND E. FRANCE BOTH RIGHT.

We have used flat covers in our apiaries for six years, and I think Mr. France and Mr. Ernest Root are both right about the method of putting them on. As our hives are in the spring, the sliding movement is seldom used. In place of that we rest one end of the cover on the hive, gently play the cover up and down, each time letting it come a little nearer the hive (giving the bees time to run out of danger, which they will do very quickly), until the cover rests firmly in place without killing a bee. Just as soon, however, as our hauling is done, and our hives are all in their proper places on their summer stands, we will hoe the top-bars of each hive clean. Then our covers can be put on with a sliding movement as well as when the hives are new. There is no difficulty in sliding the covers on the supers, for they are always clean.

If there are no burr-combs, and every thing clean, you can commence at one side and slide your cover clear across, the only difficulty being that, just as the opening is closed, if a bee is in the way it is likely to be cut in two. At that point, then, you must go a little carefully and let the bees have a chance to get out of the way.

Even if we found no difficulty in putting the covers on, I should want the top-bars hoed clean, for I do not believe we have so many burr-combs if the bars are clean to begin with. Two

can do this work better than one, for you need both hands to use the hoe, and another person must keep a smoke constantly going over the surface to keep the bees down. Spread a cloth on the ground to catch the burr-combs as they drop from the hoe. It will save picking them up. All this is a good deal of trouble, and, if thick top-bars will do away with burr-combs, then I vote for thick top-bars.

If Mrs. Axtell will try wearing a sheepskin slipper or moccasin (such as men sometimes wear inside their rubber boots) inside her light rubber boots, I think she will find them heavy enough, and more comfortable than the heavier boys' boots would be. Also, I think she will find the cause of honey-dew on her plants either the aphids or scale louse. Either of these insects will cause it, sometimes in very large quantities. As the aphids is very easily detected, I should think it more likely the scale louse.

Many thanks to Miss Nellie Linswik for information in regard to gloves. I am sure your gloves, being white, will save you many stings. But, how about the propolis on the ends of your fingers? for I must confess I dislike the propolis on the ends of my fingers and under my nails fully as much as the stings. It is such a comfort to pull off my gloves and find my hands clean. I am now wearing a pair of sealskin gloves, such as Mr. Thomas wrote me about, and like them very much. I wish you would try a pair, Miss Nellie; I think you would like them. If those who wear gloves were generally agreed that white sealskin are the best, it might be a good plan for Mr. Root to keep them in stock.

I have also had a chance to test my new aprons, and at present I think they are grand. What I may think of them when the thermometer stands at 100°. I do not know yet. Mrs. Harrison, if you can endure them during June, July, and August, I believe you would like them during the early spring and fall.

I am very glad, Mr. Root, you have given us a ladies' department. I only hope the ladies will not be so hard worked through the summer that they will be too tired to write.

Marengo, Ill., April 25. EMMA WILSON.

#### SHOES FOR LADY BEE-KEEPERS.

Reading over the articles on gloves and other suitable apparel for women in the apiary, I have noticed nothing regarding the shoes, which to me is an all-important matter; for unless my feet are dry and warm I get sick; and if my shoes are not easy and comfortable I am nervous and out of sorts every way.

For spring work, the shoe I prefer is just high enough to support the ankle; of light-weight leather, front lace, with common-sense heel. These shoes are on the market here—very neat and durable, too, for about \$2.00; but on a wide last, E or E E. As I require a narrow shoe, I have to have mine made to order. One's feet do not tire so soon with the ankle supported, and these shoes are not so warm as the regular boot. For something to keep these from absorbing moisture when the ground is muddy or damp, I use boys' rubbers. These come in one size, and are more durable than are those made for women.

#### GLOVES.

We are now using men's gloves, of a thin leather that is almost white, and so cheap that they sell for about 40 cents a pair. We add a linen gauntlet with rubber in the top. We very much prefer to wear gloves among the bees. They not only protect from stings, but keep the hands soft, and in condition for needle work and very many things we women have to do aside from work in the apiary.

#### APRONS.

For these I bought five-cent shirting, and made by the pattern recommended by Miss Wilson. These will wear well, protect the dress, and not be so warm as ticking. An ulster, as recommended by Mrs. Stow, is an excellent dress for bee-work. It is loose and cool, and covers one from head to foot.

#### THE HAT.

I like one which I fashion out of tolerably coarse braid, into a shape similar to a "sun-down." This is cool, and will protect the face and neck. We have tried broad-rimmed hats; but when we stoop over, or the sun is low, it is very apt to peep under and blister our skin, or make it so red as to be sore. We should get sunburnt too; and what woman, who has observed the aptitude of the opposite sex to admire beautiful women, wants to yield her charms, if she has any, but rather protect them?

We must have GLEANINGS; and as we can't express a "candid and outspoken opinion," finding fault, we send subscription. We are always profited by reading GLEANINGS, and we would have no part omitted. We are especially glad of the Home Talks, and of the recent addition of a Ladies' Department.

MRS. MILTON CONE.

Chillicothe, Mo., April 11.

#### BEE-APRONS FOR WOMEN—ANOTHER MATERIAL.

I see by GLEANINGS, Feb. 1, that Miss Wilson is at a loss to know of what material to make her aprons for the apiary. I am going to use blue denim (I believe that is the right name), such as men's overalls are made of, only I shall use thinner goods than are usually put into men's clothes. I use the thinner cloth because it is easier to wash, and is not so stiff and clumsy as the other. I know the honey does not soak through and soil my husband's clothes under his overalls, so I think the same goods will save my dress. Last season I wore calico until I became convinced that it was little better than nothing, as I tore one to pieces on an average of once a week, for our apiary is surrounded by sumac bushes and black-sage brush, and the swarms invariably took to the sumac for alighting-places. Now, there is nothing like brush for catching one's apron, and picking it full of holes. After the calico I used gingham, but that was but little better, so now I am going to make a raid on goods used for men's clothes, and see if I can get satisfaction out of that.

#### NO GLOVES RECOMMENDED.

I think if Miss Wilson will leave off her gloves entirely she will find that propolis has not so strong an affinity for her naked hands as it has for her gloves; and I am convinced that the bees have no such grudge to pay off on the bare hands as they have on hands in a glove. Last season was my second year with the bees, and I worked without gloves, receiving but few stings, perhaps half a dozen in all. The season previous I wore buckskin gloves and received as many as half a dozen stings in them in a day. The bees, although belonging to two different apiaries, were of the same kind of cross hybrids. There are lots of wild bees in the mountains back of us, and, strange to say, they are all hybrids, some of them showing two and three bands. I have found many a wild swarm here, but I have the first swarm yet to find whose workers do not show the yellow bands of the Italians, and yet there has been no imported queen brought here for years.

MRS. MATTIE A. BONFOEY.

South Riverside, Cal., Feb. 26.



## THE ROSY HUES OF APICULTURE.

DR. MILLER THINKS WE PUT THAT SIDE TOO MUCH BEFORE THE PEOPLE.

Is there something inherent in the business of bee-keeping that makes it so common a means of misleading? Is any other business so generally painted in rosy hues? and is there any other business that leaves in its track so many wrecked hopes? Bee-keepers, as a class, are not a set of sharpers and cheats. Outside of the ministry it is hard to find a cleaner set of men. Why, then, is there so much misrepresentation? A great deal of it is no doubt due to thoughtlessness, some of it to ignorance, and perhaps most of it to the natural desire to tell as big a story as possible.

A noteworthy example is before my eyes—not so different from many others, but noteworthy on account of its medium, the *Ladies' Home Journal*. As is well known, this is a paper of immense influence—its editor, besides being one of the most brilliant of men, being one who shows in every number of the paper that he is sincerely desirous to do all in his power to advance the best interests of woman. With a circulation of 600,000, it is easy to believe that each number is read by two million women, for each paper is probably read by three or four women. Now let me give you the gist of an article on bee-keeping for women in the last *L. H. J.*:

To begin bee-keeping, buy two colonies in spring. Divide one on arrival, equally, putting one half in a new hive. "Later in the season, when the half-colonies have become whole colonies, they are divided again. Supposing that the other colony will cast a swarm, there will be six colonies in the fall with which to begin in the spring. The swarm cast by the standard colony may be divided, also, if desired, giving seven in all. Of course, the divided colonies will store no surplus honey—only honey for their own use.

In the spring the six or seven colonies may be increased to 12 or 14, and that number will be enough to manage in the first year of actual work. . . . In an ordinary season, a colony of bees, by the non-swarming, double-hive system, will produce not less than 50 pounds of honey, often 75 and 100 pounds. This honey, if properly marketed, will bring the producer 20 cents a pound. By the system referred to, one person, with occasional help, may attend to one hundred colonies if comb honey be the product."

Let us now see what may be reasonably expected from this. Here we are, a year from starting, with 12 or 14 colonies, each one to produce on the average *not less* than 50 pounds at 20 cents per pound, or \$10 per colony—\$120 to \$140 from the whole. Pretty good for the second year. Third year gives \$240 to \$280 from 24 to 28 colonies. Fourth year \$480 to \$560 from 48 to 56 colonies. Guess we can give up teaching school now, and wear a little better dresses. Next year 96 to 112 colonies; but as 100 are enough for one person, we'll stop at that and have a clean \$1000. Or we might do as the schoolteacher mentioned in the same article, and hire several women, thus going on to enough colonies to clear several thousands.

Is it at all unreasonable to suppose that, on seeing such a statement in a journal in which she has so much confidence, one woman in each thousand will be tempted to embark in the business? Set it at the half of that, and we shall find a thousand started by that one article. Need I say that, out of that number, an even thousand will be disappointed, some so bitterly that they will wish they had never seen that excellent paper, the *Ladies' Home Journal*?

Now, I know nothing of the writer, Julia Allyn. It is not necessary to suppose that there was any intention to deceive. All the same, the mischief is there. Not to say any thing about the instruction given, which no practical bee-keeper would be likely to suggest or follow, the chief mischief is in representing the business in such golden hues—*not less* than \$10 per colony—that heads are turned; and later, hearts are—well, not broken, but somewhat damaged.

The practical question arises, "Are bee-keepers themselves at all responsible for the trouble?" To some extent, yes. In general conversation they are too apt to speak of their successes, and be silent as to their failures. The same is true as to their reports to the bee-journals. With no recognized intent to deceive, the deception is none the less there. The public is taught to believe that the chief bee-keeper in their neighborhood is coining money, when perhaps the poor fellow is skirmishing around to find some other work by which he can earn enough to buy his bee-supplies for the season.

Nor are our editors entirely guiltless of the rose-tinting business. Yes, I know the editors of *GLEANINGS*, as well as other bee-journals, publish bad as well as good reports, and really mean to be entirely fair; but, do they treat both kinds of reports alike? I may say, in passing, that misrepresentation in the bee-journals is by no means so mischievous as in other papers, for they are read by those who have already been smitten by the bee-fever. But, to return to the question whether there is no bias on the part of editors. Let us put the editors of *GLEANINGS* on the stand. Do they always make the same kind of comments on bad as on good reports? Looking through the last number of *GLEANINGS* I find only a single item bearing on the subject. On page 221, after friend Freeborn's recital of discouragements, I find, "We are glad to have you give us plain hard facts; *but*, even if true, bee culture does not differ very much from most other rural industries." Then follows a quarter of a column, enforcing and illustrating this. Now, to be entirely fair, if a report should come in from some one who had taken an enormous crop, we should find a foot-note saying, "We are very glad you have been so fortunate; *but*, even if true, bee culture does not differ very much from most other rural industries. Just as often we hear of enormous yields of strawberries, apples, potatoes, etc." and then follow with details of a case where a man made at the rate of \$2000 per acre from a small orchard of pear-trees. Let us see how it is. Opening to page 786 of last year, there is found a list of reports encouraging. A man from Utah sends a good report: "Well, friend B., that is pretty good for this season," etc. Another from Pennsylvania: "Well, friend E., that is a pretty good report," etc. Another from Missouri: "Why, friend T., you are an old wheel-horse," etc. In no case is there a *but*.

Now, friend Root, I am sure you don't mean to be unfair, and you didn't know you were leaning so much to one side, did you? Well, since you own up like a man, I may as well confess that the case is not so bad as I supposed, for I had to leaf over a good many pages to make my point, and I thought I had struck quite a bonanza when I found page 786.

Well, the moral of all this is: Let us all be careful, as friend Freeborn says, to report both sides faithfully, in all our writings and in all our talk.

C. C. MILLER.

Marengo, Ill., March 24.

[Friend M., I have noticed in other periodicals these very same things in regard to bee

culture; and especially have I noticed it in ladies' magazines. Now, although there is great truth in what you say, I fear you are, in some respects, leaning to the other side. This very thing was talked about at one of our conventions; and Prof. Cook said the story of what a woman *might* do was not so very much fiction after all; and he cited the case of a lady near Lansing who had done even better than the case in question, so that there is at least a shadow of truth in these statements. But the idea that *any* beginner may calculate on any such results is not only folly, but productive of much mischief. The reason why I have called attention to good reports of late is because we have had so many poor ones. All hands admit, I believe, through all the journals, that we have had a series of unfavorable seasons. Give bee culture its dues, but do not by any means overstate the mark. Right in this line there is something else I have thought of lately. When it begins to be known that various periodicals are paying for contributions in this field, they, like other fields, will begin to be overworked; and we must not blame the writers for paid articles if they do their very best in trying to get at something that will bring *pay*; and the general interest seems to be in accounts of *successes* rather than in accounts of *failures*. Look through all our farming and horticultural papers, especially those on small fruits, and see whether this is not the tendency; and at a time when there is so much about "farming does not pay," some of these articles sound a little bit ludicrous. Let us be cool and steady, and face our troubles with good sound common sense.]

#### SCRAPS ON BEE CULTURE, FROM AN ENGLISH BEE-KEEPER.

##### THE HOFFMAN FRAME A BEE-KILLER.

The discussion on the above, and the closed-end frame, have interested me much; so, having had some spare time during the last winter, I made frames of each, so as to be more able to judge of their appearance and apparent working capabilities. Five years ago, when commencing bee-keeping, I decided that the wide-end self-spacing Abbott frame was the one for me; but after a season or two of use I decided that I wanted something else, and made plain all-wood end frames, with  $\frac{3}{4}$ -inch ears, as used on Simplicity all-wood frames, and cut off the spacing-pieces from my patent Abbott frames; and, at the same time, I shortened the top-bar to 15 inches. I had four reasons for these alterations:

1. The  $1\frac{1}{2}$ -inch ends of the frames were constantly crushing bees which were hidden underneath, when handled.
2. As the frames closed in the ends themselves, they were used hanging on the sides of an inner box in an incased hive, without any other arrangement for closing the space at the ends of the top-bars, as in the case where frames hang in a rabbet. These did well enough till I wanted to interchange them, when, owing to the varying thickness of the combs, I sometimes found it impossible to bring the ends of the frames together without crowding the combs, thus leaving a space for the bees (where wide enough) or the heat to escape at the ends of the top-bars.
3. The spacing-piece on the alternate sides of the ends of the top-bars was always catching, especially when putting in and out the extractor.
4. The length of the top-bar (17 inches, English standard) necessitated unnecessary width of the hive.

Now, as I understand the Hoffman frame there is not only the width of the end of the top-bar to increase the liability to crush bees, but there is the additional risk where the frames come together; and it thus seems to me, in the light of my individual experience, to be impossible to handle these frames without crushing bees. This, it seems to me, would be aggravated when you come to handle several *at once*, as then the operator could hardly fail to kill the bees in the rabbets, if not some of those on the ends of the frames where they come together.

Again, when using these frames for extracting it seems to me that they would be unhandy, as the projecting sides and ends would prevent the combs from lying flat against the wire basket, or necessitate some arrangement whereby the wire basket would fit *between* the ends. Perhaps spacing the frames  $1\frac{1}{4}$  inches from center to center may help to keep the bees from building their combs so irregular as to prevent the spacing ends in the Hoffman and closed-end frames from coming together.

##### KEEPING RECORD.

I was interested in the article by friend Hatch, under the above heading. I myself have used a couple of new clean bricks on each hive during the winter and spring, to prevent the roofs from being blown off, and they are good for the purpose, but are heavy to handle, and too much machinery, and are not used during the summer, as I don't care to handle heavy brick all day, and think that four on each hive would be unbearable. My hive-roofs are covered with sheet zinc, and during the early spring and summer of these last three years I have kept a record in shorthand on the roof of each stock, in leadpencil, as to condition of food and bees, so that I had only to look at the roof to see when it was last examined, and its condition. Where a hive requires attention I simply place one of the bricks leaning over the front. This draws attention, and a look at the notes tells what requires attending to.

##### WATERING BEES.

I have tried many devices for watering bees, and now find a piece of turf, as used in many parts of Great Britain and Ireland for firing, the best. I keep a number of these dried turfs, or peats, about 6 inches by about 12 or 14 long, floating in the water or lying at its edge. The turf imbibes the water, and so is always moist, and the bees are in no danger from drowning, and can easily suck up the moisture from the porous surface. Where this material can not be obtained I should think that rotten wood would answer the purpose.

Bees were working snowdrops for pollen yesterday, for the first time, and are carrying water daily. They have been breeding for some time, as I saw young bees in a hive of Carniolan hybrids about a fortnight ago. They are wintered on summer stands in single-walled hives, besides which some had an extra story on above the excluder containing combs, partly filled with honey. Here we have no way of keeping the honey in such combs from fermenting through damp, except by keeping them near a fire in the house. I am located on the borders of the Solway Firth, and have a number of Scotch hills, or fells, in full view, while due south we have Skiddaw and the Lake district, at a distance of about 24 miles.

J. STORMONTH, JR.

Kirkbride Silloth, Cumberland, Eng., Jan. 16.

[I am glad of your experience on frames similar to the Hoffman, because there are surely some who will not like them. Mr. Hoffman himself uses hive-rabbets only  $\frac{1}{4}$  inch wide and



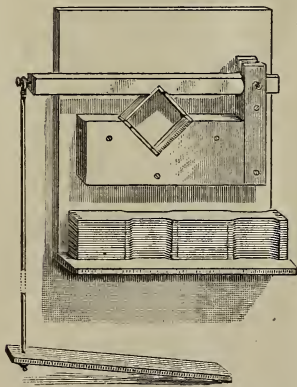
deep, and the projection on the end of the frames is only  $\frac{1}{2}$  inch long; so the liability of killing bees is not so great as where the rabbet is wider. We have contemplated narrowing the rabbet on the Dovetailed hive to  $\frac{1}{4}$  inch, but do not dare to do so yet. If the Hoffman frame should be accepted, the change would be a necessity. The Hoffman frame will kill bees as you say, if not handled rightly. If it is a strong colony, and the bees cover the projections, the frames can be manipulated so as to slide the bees off. I grant, in the hands of some the frame would be a bad bee-killer. This is also true of the loose frame. The latter can be handled so as to roll the bees over—kill some—in lifting a frame hastily from the center of a populous colony without spacing the adjacent frames further apart. Loose frames will also kill bees if they are leaned carelessly against the hive. The Hoffman presents an advantage right here. See article and engravings on page 369. Our Langstroth-Hoffmans are so made that they will not catch in the extractor-baskets. Mr. Hoffman himself is an extracted-honey man, producing annually tons of honey. He says the projections do not interfere in the extractor.

It occurs to me, that sheet zinc would be rather expensive for hive-covers. As it would not have to be painted, perhaps in the long run it would be just as cheap as tin. Who else has tried them? E. R. R.

#### A SECTION-FOLDER FOR 25 CENTS.

##### ALL ABOUT HOW TO MAKE ONE.

I know of no section-folder on the market which is not covered by a patent, preventing the bee-keeper from making them at home. The one described below was devised by myself and improved by my brother, and this makes its third season's use. It can be made by any intelligent bee-keeper at a cost of not more than 25 cents. It generally can be made from old material, and so really does not cost more than his time to make it. If made true and substantial it works just about to perfection. There is no patent on it. Perhaps it might be useful to some.



LOOFT'S HOME-MADE SECTION-FOLDER.

It is made as follows: Take a piece of two-inch plank of some kind of hard wood, about 6x8 in., and cut a right-angled notch in the middle of one side, so that the sides of the notch will be equal, and more than  $4\frac{1}{4}$  inches long. Nail this solidly a little to one side of the middle of a piece of pine board a foot wide and

about 18 inches long, nailing through the board into the plank. Next, take two pieces two inches square, one a foot or more long, and the other about nine inches long. Hinge these two pieces together in some way. Mine has a simple tongue-and-slit hinge. The short piece is nailed to the board along the end of the piece of plank, where there was room left for it, with the slit end up to receive the end of the long piece, which is to be used as a lever. Now cut a notch in the long piece, just like the one cut in the plank, about  $\frac{3}{4}$  in. deep, and cut it where it will correspond exactly with the upper corner of a folded section placed in the big notch, when the lever is at right angles to the sides of the board. This constitutes the essential part of the machine. It is to be fastened to the wall or bench at a convenient height for work from a seat. Nail a small strip on the bottom end of the board for a little shelf on which to pile the unfolded sections. A small chain or rope, and a piece of board, make a treadle. Provide a spring of proper tension to lift the lever an inch or more above the horizontal, and it is ready for work. In bending the sections to be placed in the folder, do not bring the ends entirely together, but let them slip along the sides of the notch in the lever as it comes down.

The details, of course, are capable of many modifications. The principal object of this article is to present the main idea, leaving it to the bee-keeper to make such changes as will suit his taste and circumstances.

With this machine I can fold 15 sections per minute, and do good work. With it and a home-made Arthur C. Miller foundation-fastener, having a guide on it, the work of folding sections and putting foundation into them is truly delightful; besides, the work is of the very best quality.

##### CLIPPING QUEENS.

From replies given by correspondents in the *American Bee Journal* to a query as to clipping of queens' wings, I see that, in the main, they follow the directions given in the text-books—that of seizing the queen and lifting her from the comb. I used the same plan; but the trouble I had in following it induced me to seek another. Without a hand as steady as a vise, the ordeal is rather perilous for the queen. What bee-keeper has not caught a queen by the wings or legs, and had her get hold on his fingers with her other legs, and crawl and twist until he thinks wings or legs must come off, and then let her go to get a new hold? The queen also receives a terrible scare. Do not lift her from the comb. Catch the queen by the wing, and let her hold to the comb. Pull just hard enough to hold her, and you have the best chance in the world to use the scissors; or, if you have a sharp penknife, stretch her wing over the end of your finger, and give a little stroke with your knife, and she will walk away apparently without knowing what has happened. I can do it this way in half the time.

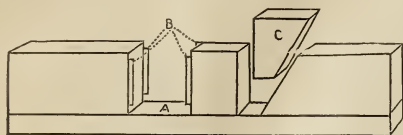
Cochran, O., Apr. 5.

C. G. LOOFT.

[You have given us a capital machine, and one that may be equal to the excellent Hubbard machine. Almost any one with a little practical ingenuity can construct one. We have used one on a similar principle to put large dovetailed boxes together, and know that a machine on that principle will work. Yours would have the advantage over the Hubbard machine, in that the operator could sit down to his work and do the squeezing with the foot. We will construct one for our own use, and report. The engraver, we notice, left off the spiral spring to raise the lever. Hello! here's another machine. It is, perhaps, simpler but not so good.]

## BRESEE'S FOUR-PIECE-SECTION FORMER.

*Friend Root:*—I inclose within a drawing of an implement which I have made, and find very useful in putting four-piece dovetailed sections together. I made the machine three or four years ago, and would hardly know how to get along now without it in using that kind of section.



## BRESEE'S FOUR-PIECE-SECTION FOLDER.

To use, pick up a side-piece of a section with the left hand, and an end-piece with the right hand. Crowd the ends in place sufficient to hold; turn the side and put on another end-piece. Drop this into the machine with the side lying on the bed-piece *a*, and the ends in grooves *b*. Pick up another side-piece and place it on top of these, crowding the corners together with the hands. Bring the wedge *c* into place, and pound together.

Sometimes the side-piece of a section is thinner than the dovetail in the end-piece, and *vice versa*; consequently I cut out a little where the corners come, so as to make the shoulders come up snug together.

STEPHEN BRESEE.

Sutton, P. Q., Feb. 2.

[Very good, friend B. If I understand correctly, you first strike the top of the section with your mallet, and then strike the wedge-shaped piece *C* with your mallet. This has the effect of driving on both the top and side of the section, without being obliged to turn it over.]

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**THAT JAPANESE BUCKWHEAT.**


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## A COMPLAINT THAT THE FLOUR IS NOT GOOD.

*Friend Root:*—In an editorial on page 341 there is a slur on some one's cook, which, begging your pardon, does not sound very well. How is the poor man to get rid of his cook for three years, especially if she should happen to be his *wife*? I don't see how he can, unless he has money to get a divorce, and he can not have much if he has not sold that buckwheat, you know. Now, then, Mr. Editor, don't you think any one but the cook can be at fault about those pancakes? I tell you, it was the miller, for sure. My brother raised some Japanese buckwheat last year, and had part of it ground at the Brodhead mills. The miller said the kernel was so large that the mill would have to be set wider for it. That flour was lighter-colored than that from the common grain, but the miller said the hull was heavier than the silver hull, and did not yield as much flour to the bushel. They would give only 50 cts. for it, when they were paying 55 for the silverhull. Some of the same grain was taken to the Albany (Wis.) mills, and that flour was dark, as though it were mixed with fine bran. The bran itself was all broken, while the Brodhead bran was whole. The Albany miller said he never ground such buckwheat before, and never wanted to again. Two families who had the Albany flour complained of the cakes being so bitter they could not eat them. We used part of one of the same sacks, and thought it was good, so I think it must have been bitter tongues they had. Some said it was the best flour they ever saw. Japanese buckwheat is all right; but what is any one to do with it if the miller won't grind it or buy it? AL. HANN.

[My good friend, that was only a piece of pleasantry, about the cook. We should be very sorry indeed to think of casting a slur on any bee-keeper's wife, or, in fact, the wife of anybody else, for that matter. The facts you give us fix the blame, probably, just where it belongs. The millers are not used to having a buckwheat with grains so large, and their mills are not at present adapted to it. But they must move right along, and progress as the age progresses. The Japanese is surely all right. Instead of getting another cook; then, get another miller.]

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**THE PLANT-LOUSE ON THE WAX-PLANT.**


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## HOW TO DESTROY IT.

*Prof. Cook:*—I send you a small box in the same mail with this. It contains a leaf of the hoyo, or wax-plant, on which there is some sweet deposit; also a twig of the same plant with the little insects that produce this deposit. The plant has not been out of the office, where it runs up one window, for several years. The insects were all alive when placed in the bottle, but I fear they will be dead ere it reaches you. It was handed to me at Boonville by Capt. Tolloferro during our State convention of bee-keepers, and we were all curious and anxious to know whether the deposit is honey-dew, the name of the insect, or species, etc. Please examine, and report if already discussed in the journals.

Mrs. J. M. NULL.

Miami, Mo., Apr. 12.

[Prof. Cook replies:]

In response to the inquiry sent by Mrs. Null, let me say that the sweet substance on the leaves of the hoyo, or wax-plant, is genuine honey-dew, and the insects sent in the accompanying bottle are genuine plant-lice. In these the nectaries—the black tubes which project from the back—are very long, as is also the spyglass-like ovipositor. The beak, or sucking-tube, is always long in plant-lice, and it is through this that the lice suck the sap and life from the plants. The sweet substance, or honey-dew, comes from the tubes or nectaries, and, in many cases, that from these plant-lice is wholesome, delicious, and no injury to honey, which it helps to produce.

The remedy for this plant-louse evil is the kerosene emulsion, which should be made as follows: Dissolve, in two quarts of water, one quart of soft soap or  $\frac{1}{4}$  lb. of hard soap, by heating to the boiling-point, then add one pint of kerosene oil, and stir violently for from three to five minutes. This is best done by pumping the liquid into itself through a small nozzle, so that it shall be thoroughly agitated. This *mixes the oil permanently*, so that it *will never separate*, and can be diluted easily at pleasure by simply shaking or slightly stirring after adding the water to dilute it. I have often stated, that it is not necessary to use so much soft soap, but that it is better, as it insures a perfect emulsion even upon dilution, and the soap itself is an insecticide, and valuable, aside from its emulsifying powers. I have also stated, that, in using soft soap, a quart of water would do. I prefer, however, the two quarts, as the emulsion is more sure; and the thinner material permits more ready and more speedy dilution, especially in cold weather. I have always placed soft soap first, as most farmers have it, and convenience is very important in such matters. A farmer will make and use an article when all the ingredients are at hand, whereas he would not do so had he to go and purchase them for this express purpose. The agitation should be violent, but need not be



long. We have formed a perfect emulsion in one minute, even with cold water. This emulsion should be diluted by adding an equal quantity of water. Shake well, and apply to the plant by the use of a syringe or force-pump, like the Lewis or Whitman. It kills all the lice, but does not injure the plants.

Many readers of GLEANINGS will be glad to know that this kerosene emulsion is a sure cure of cattle, horse, and hog lice, and also sheep-ticks. For the lice, scrub the animals with the emulsion diluted with one-half its bulk of water. We use a brush, and do it thoroughly. The cost for a full-grown cow is not more than five cents and five minutes of time. It kills nits as well as lice, and seems to brighten the hair. I think the scrubbing with this soap solution is excellent for the skin, and thus we do more than kill the lice. For sheep we dip the animals in the emulsion, diluted with one-half its bulk of water.

A. J. Cook.

Agricultural College, Mich.

### FRAGMENTS.

#### DOOLITTLE ON APRIL 15TH GLEANINGS.

I see by Dr. Miller's Stray Straws in the April 15th GLEANINGS, that he is a sharp-eyed fellow or he would not have noticed that you were a little mixed in your reply to Mr. James on hatching chickens over hives of bees, he (James) desiring to know whether he could do this, while in reply you tell him that a bee-hive makes a good "hen's nest." But really, Dr. M., are you sure that an old hen is better for hatching chickens than a hive of bees? Just put your hand under the chaff or sawdust cushion over a good colony, some cold morning, and see if it would not be a good place for chickens to form inside of an egg-shell. But here comes a friend who throws a little light on the matter in a negative way. A letter, just at hand, speaks in surprise that Dr. M. should have any trouble in getting queen-cells "on a stick" just as he wants them, for he has no trouble; and then he goes on to say, that, after they are capped, he puts the cells in "the incubator where they hatch very even and perfectly," thus saving the bees any trouble in brooding them after they are capped. Now, if an incubator will hatch queens perfectly, why will not a hive of bees hatch hen's eggs more perfectly than "an old hen"?

#### NOT THE BEES NOR THE MICE.

In a late number of GLEANINGS a friend told of bees eating wheat during the winter, as there was bran on top of the wheat, under the hive of bees, which were set in the barrel of wheat. But on page 304 friend France spoils all of this pretty romance by telling us that it was not the bees at all, but "mice" that ate the wheat and left the bran there. Then the editor, after congratulating Bro. F. on his sharp observation and common sense, wonders if, "after the mice had worked in the wheat," the bees did not use the bran. Well, yes, about the same as the mice ate the wheat. I take it that neither the bees nor the mice had any thing to do with the wheat, only that, as the bees uncapped their honey in the hive above, the cappings of the honey, in old tough combs, fell down on the wheat, as we often see them in early spring on the bottom-boards, until these cappings covered the wheat, and were mistaken by our friends for bran, as the cappings of old combs, when gnawed off and licked dry by the bees, resemble bran very much. Sorry to spoil this nice little romantic story, but I believe the above the real facts in the case.

### BEE-ESCAPES.

On page 306 I find friend Dibbern thinking that "Doolittle will not find much use for bee-escapes," on account of his wide-frame system. In this he is mistaken; for in the way I use the wide frames they can be handled the same, collectively, as any super, as will be seen by a late article of mine, while they have the advantage of being handled by the wide frame or the single section at the will of the operator. This is why I "froze" to them after testing nearly all the supers so far given to the public. I have had many letters of appreciation of said plan of using wide frames since I gave it in GLEANINGS. Last fall I used some of the new escapes, to my entire satisfaction, under these wide frames, and hives of honey that were tiered up during the summer; and I wish to go on record as saying that the bee-escapes are among the greatest inventions of the past. By them the raising of either comb or extracted honey is much simplified, and the hard labor materially lessened.

### WAX SECRETION.

On page 319 Bro. France thinks the cause of bees secreting wax comes about by the bees having to hold honey in their honey-sacs. Exactly. That is as I have always argued. Now, if Bro. F. will closely watch a single-comb observatory-hive, he will see that the old bees, on returning from the field, give their loads of honey to the young bees, and that these young bees hold these loads of honey till they are sufficiently evaporated to be deposited in the cells; hence it comes about that it is the *young bees*, very largely, which secrete wax, and that wax *must be* secreted to a greater or lesser extent, from the standpoint of Bro. F. and myself, whenever there is a flow of honey of any great amount. Prof. Cook might as well haul down his flag when such "weighty" men (avouirdupois) get after him.

### OLD BEES SECRETING WAX.

I have read over and over again what friend France has to say on the same page about old bees secreting wax, and his proof of his assertion; and I am compelled to think there must be a mistake somewhere about that six-weeks-old swarm building comb. Time and time again have I proven that bees having a queen do not live over 45 days during the swarming season, and I am also fully as positive that no bees less than two days old ever go out with a swarm. Now, if there is no mistake about that six-weeks swarm, all the bees must have been dead that went out with the swarm one day after the young bees in the last hive began to hatch, which would have been the ruin of that colony, for the bees would have become so old and worn out, also so few in numbers, that no young bees would have hatched, unless the weather had kept warm enough night and day for a few days, so that the brood would have hatched of itself. If the advice of GLEANINGS was followed, and a frame or two of brood given to these swarms when they were hived (as I firmly believe an investigation of the case will reveal), then the whole thing would be reasonable; but then it would not prove the point friend F. wishes to make.

### NAMELESS BEE-DISEASE.

On page 325 I see that Prof. Cook is surprised that Dr. Miller should question the curing of the nameless bee-disease by the removal of the queen. I know that it is generally supposed to cure the disease; but I also know that it does not always. Last year I purchased a queen from the South that gave bees with this disease in its worst form, the bees dying by hundreds every day, all bloated up so full that they could

only roll over on their backs, kick a spell, and die. I changed the queen in August, so that, by August 25th, young bees were hatching plentifully from the new queen. But these bees took the disease, and continued to die, as did the others, all being dead and gone in February. This was my only loss in my new roofed beecellar.

G. M. DOOLITTLE.

Borodino, N. Y.

[Very good, friend D. I am glad to see there are so many sharp ones scrutinizing all these statements and points that are made. I still think, however, that I have had bees, even during the honey season, live fully as long as friend France represents; at the same time, I agree with you that they usually wear themselves out, and are gone about the time you mention. This is why I have so strenuously urged that, in a queen-rearing apiary, every nucleus should have more or less brood all the while. Things go along ever so much better if there is never a time when unsealed brood can not be found in the nuclei. This gives all hands something to do, and at the same time it insures constant reinforcements of young bees.—If it should happen that neither the bees nor mice had any thing to do with the consumption of that wheat, I don't know but I shall feel a little bit disgusted. But, friend D., what about the roast chicken that has been given so many times, to keep the bees from starving?—I am glad to know you are succeeding with bee-escapes. When such "weighty" men, as you have it, make a thing a success, we can draw a breath of relief, and get over our anxiety. Ernest has just been putting the bee-escapes into the A B C book, and I was afraid he was giving them too much prominence.]

A. I. R.

### HIVE RECORDS.

THOSE HANDY SLATE TABLETS THE BEST OF ALL.

*Friend Root:*—Bricks, stones, pebbles, have all been suggested, most of which are cumbersome and unsightly. Were I to adopt any of these it would be the bricks, as recommended by friend Morrison, p. 262. One point claimed for the bricks is, that they hold down the covers during storms or high winds. Now, I do not

but intend to prepare one soon, and study it until I know it by heart. This spring, in going over our colonies, my brother and I just laid a slate in the center of the cover over colonies needing feed, so that, when we wished to feed, we could tell, by just glancing over the apiary, which colonies needed feed, and got into the habit of calling those "doubtful States," to use a political phrase. These slates being small we can make a greater combination than can be got by using bricks; and being black, or nearly so, when laid on a white hive-cover they can be plainly seen as far as necessary. Some may say these little slates will blow off. I would say, in reply, that I have known them to blow off the nail when hanging on the side or end of the hive, but never, to my knowledge, has one blown off the cover. Being so thin, when laid flat on the cover the wind can not get under them.

Below are a few of the different positions that the slates may occupy, each position signifying a different meaning, as with the bricks.

Besides the above, more can be invented if necessary. For instance, laying one diagonally across the different corners, as in No. 10. It is useless for me to give the different meanings that the different positions signify, for every apiarist can manage this to suit himself. We might say, No. 1, weak, needs feed; No. 2, gave queen-cell; No. 3, hatched, etc.

When you see the slate, you know, without going to it, what condition the colony is in. Besides this, the slate contains necessary dates and writing. I always abbreviate as much as possible when writing on these little slates; as, S. Q. C., select queen-cell; fr., frame; int., introduced. On the left-hand upper corner write the year (1891); next the month and day, thus: 4-20 (April 20); and below, other writing.

When a colony is strong and in a normal condition, the slate hangs on a nail on the end or side of the hive. The one side of the slate contains the age of the queen, and when the swarm was hived, etc., if you wish to keep such data.

The best thing that I have found for writing on these slates is an ordinary leadpencil. This writing is not very plain to read; but if you get the light to fall on it just right you can read it easily. Only a few days ago I picked up one of the slates, and found some writing of early last June, and it was as plain, almost, as if it had been written only a day before, and looked as if it might last a year or two longer, and this had



MILLER'S METHOD OF KEEPING RECORD.

care to handle the extra weight simply because I want the covers secure. I will admit, that covers do blow off occasionally, but I do not know that it ever did any serious damage to the colony, unless it should remain off for a considerable length of time in cold weather. At any rate, if I were very particular about having the covers secured on the hives I should certainly use a convenient hook or clamp of some kind, in preference to a weight of any kind. And now allow me to present my method. If it has ever been mentioned in GLEANINGS I do not remember of seeing it. Now, what do you suppose I am going to mention? Simply the little slates advertised by A. I. Root for this purpose, only I propose to use them as friend Morrison does his bricks, with the writing combined. So far I have not adopted any particular system,

hung on the hive all winter, exposed to the elements.

S. E. MILLER.

Bluffton, Mo., Apr. 20.

[We have used the slates as you speak of on hive-covers in different positions, to indicate certain information, for years. Our apiarist, Mr. Spafford, has a code of his own which he has used with considerable success. I am glad you brought the subject up, because I doubt whether I should have thought to mention it. We have used slate and red leadpencils for marking the slates. The former efface by rains too easily, and the latter are too indelible after the markings have been on for a few months. But a common leadpencil—that is something I had not thought of before. We will try it at once.]

E. R. R.



### SHADE FOR THE APIARY.

#### A SIDE-HILL APIARY.

I am glad some one has taken up the subject of shade in our apiaries. It is a subject on which a great deal has been said, first and last; but the only object in view seemed to be to shade the hives and bees, and not the keeper. I can see no season why, as long as we are going to shade the hives, we can not have such as will protect the apiarist also, and make it more comfortable and convenient for both. Of course, this is not always possible; but when one has a young orchard, or trees of any kind that are not too dense, and are somewhere near where we want our bees, I say, why not put them there? I like sunshine as well as anybody, but

apple-trees, with a few sprawling peach-trees in front. These trees are kept pruned, and none of the limbs are ever allowed to grow so low as to prevent the keeper from standing or walking erect, without getting the hat jammed down over the eyes, as Dr. Miller did. The picture was taken in the fall, after the trees had shed their leaves, and I had begun putting on the packing-boxes, or outside protecting-shells. It was such a beautiful morning when the sun peeped up from its hiding-place, that I could not resist the temptation to run over to my neighbor, who is a photographer, and have him take a shot. You will see by the picture that I don't believe in bare ground for apiaries. Any thing but going out and finding some of our nice white hives all spattered with mud after a heavy rain.

CHESTER OLMSTEAD.  
East Bloomfield, N. Y., Feb. 24.



C. OLMSTEAD'S SIDE-HILL APIARY.

I think as Josh Billings did about the pudding, I can see no reason for a person working over colonies of bees with the scorching rays of the sun pouring down on him from morning till night, when, by a little forethought, it might be avoided. I have sometimes thought of moving my bees to some open plot and starting a vineyard apiary, with grapevines to shade the hives. I know such an apiary well kept would not only look nice, but would no doubt be for the very best welfare of the bees. But after working a few days in my brother's apiary, which is so situated as to get the full and direct rays of the sun, I was only too glad to get back under the sprawling limbs of the old harvest-apple trees, where I could work quite comfortably, even during very hot weather.

I send you a photograph of my apiary. It is situated on an east side-hill, under the early

[Fruit-trees not too dense make the best kind of shade, and I doubt whether you would find the grapevine as good. Somehow (they do with us) the vines get neglected, and then the shoots will stick out in the way, much to the discomfort of the apiarist. Your side-hill looks very pretty.]

E. R. R.

### DOOLITTLE'S QUEEN-CUPS A SUCCESS.

#### KEEPING A RECORD ON THE HIVE-COVERS.

It seems a little surprising that there are so many who fail to make a success of Doolittle's artificial cells. I tried them last season at different times and had scarcely any trouble with them; but having the young queen fertilized from the upper story of a hive, with a laying



queen below, was not such smooth sailing. I doubled up two colonies, to try this plan, and arranged the top story for three queens. But one of them began laying. At another time this large double hive concluded, with so many queens and bees on hand, they might start a new colony (I keep all laying queens clipped), so they swarmed out, and one of the queens from the upper story led the swarm to the woods.

Does no one keep his record on the top of the hive-cover? I consider it just perfection. Early in the season I go to each hive and learn the condition by examining the brood-nest, queens, etc., and make a record something like this on top of the tin cover, with a pencil:

1891, April 15. } Reared in season of 1890.  
O. Q. clipped 1890. } Old queen's wing clipped.

Later on I make a record of any thing of importance, such as swarming, disposal of the old queen, rearing young queen, supersedure, etc. This system is always handy to see at a glance, without disturbing the hive, yet it does not mar the beauty of the yard as bricks do, nor can the record be lost, as in the case of the careless moving of bricks or blocks on top of the hives by children or visitors. And another advantage is, it shows every record made through the season as well as the last examination. At the end of the season the apiarist may make a record of each hive, in a book kept for the purpose.

S. S. LAWING.

Henderson, Mo., April 18.

[Yes, you can keep records on hive-covers themselves; and when the covers are pretty well marked up it will be about time to paint them, and then you can put on new records. We have done this to some extent, but we like the slates spoken of by friend Miller on p. 422.]

E. R. R.

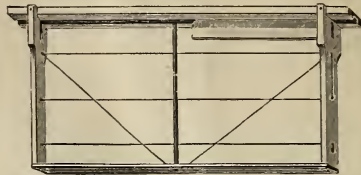
#### EXTRA DEPTH OF TOP-BARS NO PREVENTION OF BURR-COMBS.

OLIVER FOSTER'S EXPERIENCE.

Three years ago, depending upon the testimony and advice of those who claimed to know, I put into my apiaries several thousand combs with top-bars  $\frac{3}{8} \times \frac{1}{2}$ , the object being to diminish burr-combs by the extra depth of top-bars. Two years of practical work with these has fully demonstrated that at least twice as many burr-combs are deposited between them as there are between the old-style top-bars which are  $\frac{5}{16} \times \frac{1}{2}$ .

Why should we expect any different result, since the vacuum to be plugged is  $\frac{1}{2} \times \frac{3}{8}$  between the former, whereas that between the latter is only  $\frac{1}{2} \times \frac{5}{16}$ , the spacing in each case being  $1\frac{3}{8}$  from center to center? So I am satisfied that extra depth of top-bars is in no case a prevention of burr-combs between them. But if the spaces between them are too wide, it has an opposite effect, as it increases the unoccupied space, which is the chief cause of burr-combs. If extra depth ever has any effect in diminishing them in the bee-space above the bars, I have failed to notice it. But if they are ever deposited in a bee-space of proper dimensions, they do not originate there, but are simply a continuation of those extending from the combs below through the spaces between the top-bars. If we make these spaces and the bee-space above uniformly about  $\frac{1}{4}$  inch, there will be no burr-combs deposited in either if the top-bars are only  $\frac{5}{16}$  thick. The use of a thousand or more wide top-bars last season has settled me in this opinion, and I fail to find any report that conflicts with it. But we

should not overlook the importance of having the spaces between the slats above the bee-space as narrow and as accurate as the others.



I now make my top-bars  $\frac{5}{16} \times 1\frac{1}{8}$  throughout their whole length, and space them  $\frac{1}{2}$  from center by using an end-bar that wide at the top, as shown by the accompanying cut. This form of frame is much cheaper than the Hoffman, and it is stronger, and I think equal to it in other respects.

OLIVER FOSTER.

Mt. Vernon, Ia., April 2.

[Your testimony, friend Foster, it seems to me, does not conflict with the discussions on thin and thick top-bars that occurred a year and a half ago, when the discussion came up in our journal. It was not then agreed that a top-bar  $\frac{3}{8}$  square would prevent burr-combs (see GLEANINGS, Nov. 15, 1889; also Jan. 1, 1890, page 20). Mr. Hall, and all the rest of those who spoke in such high praise of the new top-bars, recommended *extra width* in addition to *extra thickness* (see pages 20 and 131, 1890); besides that, a small bee-space and accurate spacing were later suggested as very important factors. You may remember, in answer to *your article* a year and a half ago, I told you that a top-bar  $\frac{3}{8}$  square, alone, would not accomplish the desired result (see GLEANINGS, p. 126, 1890); and your experience above is just about what I should expect. Where did you see in the journals, three years ago, that top-bars  $\frac{3}{8}$  inch square would prevent burr-combs? Three years ago was about a year and a half *before the discussion* in GLEANINGS came up. Extra width, careful spacing, and a small bee-space, will prevent burr-combs. You say, then, "What do you want an extra thickness for?" Because, on the Langstroth frames, a  $\frac{5}{16}$  top-bar, a  $\frac{3}{8}$ —yes, even a  $\frac{1}{2}$ -inch top-bar—will sag; and just as soon as the top-bar sags, the bee-space above is changed, and away go the burr-combs again. Let me repeat again: The extra thickness is intended to prevent sagging, and so preserve the very important factor—bee-space. You say, use folded tin bars. In our apiary, on L. frames it does not accomplish the result. In order to keep from dropping out, the folded bar must be a little long. The result is, it has to crowd up the top-bar, or push down the bottom-bar a trifle. If the diagonal wires are drawn too tight, the trouble is aggravated. We have several thousand of such combs in our apiary, and there are very few of them indeed that have level top-bars. If you use a square frame, then a top-bar  $\frac{3}{8}$  inch will probably answer; but even then, the folded tin bar is a thing the bees do not like. I have just been out in the apiary looking over some combs, and about half of them have the folded tin bar, naked on one side, and the cells adjacent to it are practically useless, either for honey or for brood. Now, why not have these cells taken up by a top-bar that won't sag, and one that won't have to have a folded tin bar to keep things straight? We have made our top-bars for loose frames, for a year and a half back,  $1\frac{1}{2}$  wide and  $\frac{3}{8}$  thick. We do not make thick-top frames  $\frac{1}{2}$  wide, because we know there would be burr-combs, sure. Our fixed frames have top-bars only  $\frac{3}{8}$  thick and  $1\frac{1}{2}$



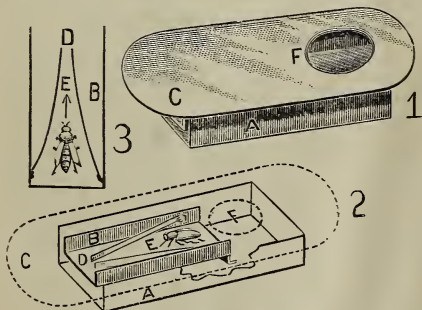
wide. Top-bars to the loose frames might be also  $\frac{3}{8}$  thick, but the lumber comes in such shape that it is about as cheap to make the extra  $\frac{1}{4}$  inch as to make it only  $\frac{3}{8}$ . After all, friend F., after taking all the facts together, you see we do not disagree unless it is in the use of the folded tin bar and the extra thickness. I notice that you have adopted the Hoffman widened end. We tried them last year, but have abandoned them and now use the top-bars widened at the ends, as well as the end-bar, as Hoffman has them. For the reasons of this, see page 368, May 1, current year; also page 489, 1890.]

E. R. R.

### THE PORTER SPRING BEE-ESCAPE.

#### THE BEST ONE YET DEvised.

Before entering upon the subject proper of this article I wish to tender my thanks to the publishers of GLEANINGS for their kindness in furnishing proof of engravings for illustrating it. A good engraving often gives a clearer conception of the thing under consideration than a whole page of print; and in this case I think the GLEANINGS artists have succeeded so nicely that there is but little left for me to do more than give the dimensions of the different parts, together with a comparison of the practical workings of the Porter spring escape, with that of other escapes now in use.



THE PORTER SPRING BEE-ESCAPE.

Engraving No. 1 shows the escape complete, which, when placed in an escape-board, is ready for use. The bees enter the escape at F and pass out at D, as shown in cuts 2 and 3. The escape proper, as shown at A, is  $3\frac{1}{4}$  inches long by  $1\frac{1}{2}$  wide and  $\frac{1}{2}$  inch deep. The top piece C is  $1\frac{1}{4}$  in. long and  $1\frac{1}{4}$  in. wide. The part B, containing the springs as shown in cut No. 2, is  $\frac{3}{4}$  in. long, 1 in. wide and  $\frac{1}{4}$  in. deep. The object of this inner part, B, is to admit of a depression under F for the reception of dead bees that may chance to get into the escape. A dozen or twenty dead bees may get into the escape and not interfere with the bees out between the springs. To prepare the escape for use, make a plain board of  $\frac{1}{2}$ -inch material, the size of the top of the hives on which it is to be used. Clean the board at sides and ends so as to provide the necessary bee-space above or below the board. Bore two holes  $3\frac{1}{4}$  in. apart from center to center, and near the center of the board, with a  $1\frac{1}{8}$ -in. bit, and cut out the intervening wood; drop the escape into this opening and it is ready for use.

To adjust the escape-board on the hive, remove the hive-cover. A few puffs of smoke are necessary to prevent the bees from becoming angry. Raise the super, place the board on the hive, and set the super on the board, and return

the hive-cover. All is done in less time than is required to write this sentence, yet this is all the time that is required by the bee-keeper to remove the bees from the super, as the bees pass out at their leisure, and the super is taken to the honey-house at any convenient time after the bees have deserted it.

During the season of 1890 I removed all my comb honey, about 2500 lbs., from the hives by the use of escapes, and experienced less inconvenience and annoyance by robbers or bees in my honey-house than I have frequently experienced in removing a couple of hundred pounds by the old method of smoking, shaking, and brushing of the bees from the supers.

I used four different patterns of escapes—the cone, trap-door, Porter spring, and Mr. Dibbern's latest pattern. Triple-cone escapes made of perforated tin work quite well at times. Occasionally quite a number of bees find their way back through the cones into the super.

The trap-door escape works nicely for a little while, but they are soon rendered useless on account of propolis.

Mr. Dibbern's new escape gave very poor results, as, in my first trial with it, there was very little decrease in the number of bees in a T super in 24 hours after adjusting the escape on the hive. My second trial was but little better, as only about half the bees were out of the super in 24 hours. In subsequent trials it worked some better, but not any better, if as well, as the cone escapes, as the bees are slower in passing out through the Dibbern. I very much dislike the Dibbern escape, for two reasons; *i. e.*, it is just as liable to clog up with dead bees as the cone escape is, and there is no way of clearing it out or knowing that it is or is not in working order without taking it apart.

The only objection I see so far to the Porter spring escape is, that it has no *automatic* principle that will extract the bees from the supers in a given time; and the bees of some colonies, under certain conditions of weather, are very slow to move out; but once they are out, they are certain to stay out.

While the bees have shown a disposition to propolize the perforations in the perforated tin cone escapes, and plaster over those made of wire cloth, and glue the doors of the trap-door escapes fast, they have put but very little propolis into the spring escapes, but not enough to interfere with the working of the springs in the least.

But little need be said concerning the utility of a practical bee-escape for removing comb honey from the hives. Any bee-keeper who has gone through the vexations of removing his comb honey from the hives during a honey dearth will agree with me that it is any thing but a pleasant task; while with a practical escape the vexations are all removed—no brushing, no shaking of bees, no robbing, and no bees in the honey-house. The escape-boards can be adjusted at any time of day, and is done so quickly that the robber-bees have no chance to get a start. The supers can be taken off at the bee-keeper's leisure after the bees have deserted them, which is usually from five to eight hours. Many of my supers were carried in early in the morning, without hat or veil, while the good wife was setting the breakfast.

Concerning the inventors and manufacturers, R. and E. C. Porter, of Lewistown, Ills., of the Porter spring escape, I will say, that, so far as I have been able to learn, they are the oldest practical bee-keepers in this part of Illinois. At present they do not keep a very large apiary, only some 60 or 80 colonies, on account of so many bees near them. In 1882 they obtained between 9000 and 10,000 lbs. of extracted honey from about 80 colonies. In 1886 they obtained

10,000 lbs. from about the same number of colonies.

Their escapes have been as thoroughly tested as one season's work can test them, and they are well enough pleased with them to manufacture several thousand of them, and I presume they will advertise and put them on the market at once.

S. A. SHUCK.

Liverpool, Ill., April 9.

[Many thanks for your valuable article. We are all anxious to know what we may expect of the bee-escape; and, according to your experience, our hopes of its practical utility are not disappointed. If others shall have experience similar to yours, it does indeed promise to work a revolution in the methods of taking off honey, and we have already had some good reports. We, too, have been experimenting with different styles of bee-escapes; but none do the work so perfectly as the Porter, illustrated above. It would get *every* bee out of the upper story, even off combs of brood. With the Reese and Dibbern escapes, a few bees would be left, they having evidently found their way back; and once or twice we found them clogged with dead bees. We have just received a few samples of the Porter escape. They are beautifully made, and the price is moderate. If this escape shall do as well as it has done for you and ourselves, the two Porters deserve a vote of thanks for a perfect bee-escape, and the right of exclusive manufacture, whether they have a patent on the same or not. We presume a good many of them will be sold, and we should like to have reports of where thorough tests have been made. The propolizing feature of the Reese and Dibbern, as well as their occasional clogging with dead bees, is rather against them. The two brass springs at the point D, in the Porter, are so exceedingly sensitive, that, if a bee were to touch them with its mandibles, I imagine they would tremble so that the little propolizer would become cross-eyed in trying to keep track of the oscillations, and give the matter up in disgust.]

E. R. R.

### A GROWL.

CHANGES; THE 8 OR 10 FRAME HIVE; FAST HIVE-BOTTOMS.

Mr. Root:—Why don't you have a growler's column in GLEANINGS? I should delight to be a regular contributor to that department. To begin with, you have made a new hive. After telling us all these years that a ten-frame hive with beveled edge was essential to our health and happiness, you then turn and say, "We do not any more recommend the Simplicity." It reminds one of the words of Mr. Heddon, years ago: "The practical bee-keeper will, sooner or later, demand a readily movable hive, with fast bottom," and then he at once proceeds to invent and patent a new hive with loose bottom, and one that is about as movable as a barrel of sugar with the bottom fallen out. O consistency! But I am glad you are going to drop the Simplicity. I never liked it, and have been very glad to sell the few I bought of you (on your recommendation) to my neighbors. But seriously, now, I think a man in your position should be very sure he has got something decidedly better when he makes such a change. With my limited experience I certainly do believe the old-style ten-frame Langstroth is a better, safer, and more economical hive than either the Simplicity or the Dovetailed.

But one thing that is not sufficiently considered by writers in the bee-papers is, that different locations and circumstances require different

management. For instance, my hives nearly all stand fully exposed to the sun; and by having a division-board on the south side of my ten-frame two-story hives they require no shade-board; whereas, if I used your eight-frame hives, every one would require a shade-board. Then, again, I prefer to winter most of my bees out of doors; and if I used your eight-frame hive every one would require an outside case and cover. But the ten-frame hive, with a chaff division-board on each side, and a bushel of chaff above, makes a very safe winter hive. I have not lost a colony in those hives in five years, that was in a normal condition in the fall; and my bees have increased in that time from 20 to 100 colonies.

If the bees are wintered in a cellar, and are shaded by trees when out of the cellar, then an eight-frame hive would not be so bad; but I should prefer the old Langstroth, even then. In my location we are about as likely to have a yield of honey in September as any time. The nights are cool, and the bees will invariably be driven from the supers on your eight-frame hives, at that season of the year. I have had several of them in use for two years; and I know that, at that season, the bees will not finish up the outside sections, or store nearly as much honey in the supers as they will in the T supers on the old ten-frame Langstroth, with an inch space between the super and outside shell of the hive. If the honey were all gathered in June or July this last objection would not hold.

I must now tell you about another thing. You have talked to us about shoddy goods, while, at the same time, you were sending out thousands of brood-frames with a top-bar scarcely three-eighths of an inch in depth. Every novice who has used these frames has recognized their frailty from the first. To be sure, the lighter the top-bar the more necessary it was to buy your folded tin and wires to brace them up; and if we did not use the tin braces, it was very essential to use the honey-board.

The Northern Illinois convention is reported as deciding that a small bee-space between top-bars and sections is of more importance in preventing brace-combs than a thick top-bar. But, how are we to maintain the small bee-space with a top-bar that will invariably sag from  $\frac{1}{8}$  to a full half inch? Do you realize the injury you have done bee-keepers by sending out those weak frames? I suppose there are millions of them in use, and not one in ten but has sagged  $\frac{1}{8}$  inch or more. Can you suggest a remedy?

A. C. BUGBEE.

Lochiel, Ind., Mar. 18.

[We used to have a "Growler," but it died out for some reason—may be for want of patronage. Do not be in haste to accuse A. I. R. of inconsistency. It is the "boys" that have abandoned the Simplicity hive with its beveled edge, and who recommend, instead, the Dovetailed hive. If you will consult our price list you will see we make the Dovetailed hive both 8 and 10 frame size; and if you will study its construction you will discover that the bottom of either may be made permanently fast or not, as desired. But you say, "Don't like the flat cover, and want a portico." By consulting the price list again you will see you can have a gable cover and a portico to the Dovetailed hive. Now, please turn to "Frames." You will find we do not recommend top-bars less than  $\frac{3}{8}$  of an inch thick. Why? because less than that thickness is liable to result in sagging, and then the important thing—a bee-space that will prevent burr-combs—is changed. On this point you are just right. We must have top-bars thick enough to prevent sagging, and only



a few nowadays want *thin* top-bars with the folded tin bars.

Say! in order to be consistent would you have us stick to old things and make no progress? Is it a weakness to change? If we could have adopted the present improved appliances years ago it would have been well. Why didn't the mower and reaper manufacturers adopt the self-binder in the first place, instead of coming to it gradually? Why do we give the *preference* to the 8-frame width? Because it is better adapted to most bee-keepers, and the majority demand it. *You* may be able to winter in a single-walled 10-frame hive with a dummy on each side, and chaff on top; but *all* bee-keepers can not. So they winter in the cellar, and hence do not want a hive larger than they need. You have given some good hints, but there are some things you have overlooked. Consult our 1891 catalogues.] E. R., or one of the 29-year-old "boys."

### SOMETHING ON THE BRIGHT SIDE OF GREAT TRUSTS, COMPANIES, AND COMBINES.

THE HARTFORD STEAM-BOILER INSPECTION AND INSURANCE COMPANY, TO PREVENT EXPLOSIONS, ETC.

As we approach the twentieth century, every little while I am surprised and astonished at the great stride the world is making in being *helpful* to one another. A few years ago our great shops and factories were shut up from visitors, and a great many of them are now. But I think the matter is changing. If the demands of a certain business required something that the proprietor knew nothing about, he might visit the large manufacturing establishments in vain. He could not get the information he desired. We now have experts in steam-engineering, in electric lighting, in erecting waterworks, and, in short, in every line. Experts go from place to place, and teach all that is to be known about these new things. Of course, they get their pay for it—that is, they usually do sooner or later. But even if they do, I think it is just wonderful the way in which the world is getting to be helpful. Our conventions are a tremendous stride in this line. Horticulturists meet in convention, and spend valuable time in teaching green hands free of charge, all that is to be known about their business, and so in almost all other departments. The man who says he knows something valuable, but will not tell it unless they raise a purse of \$50.00 for him, is away in the background. At the present time he could hardly get an audience of one. Now, these teachers are sometimes keen for business, and often work hard for trade; but if they tell the truth and furnish good goods, I think they are public benefactors. In our business we are continually extending our line of steam-power. Two or three years ago I said to our boys, "Oh I just wish we could have the advice of some man who knows all about engines and boilers, and shafting and hangers, through all the different factories all over our land! I wish I knew how the big establishments manage all these problems."

Well, it was not very long afterward before God sent just such a man to look over our establishment. You may think my expression, "God sent him," a little off; but I believe that is the right way to put it. This man who came to us had been visiting pretty much all the steam-plants in this and other States. He knew exactly how every manufacturing establishment solved certain problems. He told us how tall a chimney we needed, and how large

inside. He told us all about the water we used in our boilers—how to prevent scale. He knew all about flues and flue-cleaners. He had been inside of hundreds of boilers after they had been used a term of years. He knew exactly when a boiler is unsafe. In fact, he was the inspector for an insurance company who make it a business of insuring boilers against explosion. When he said their company wanted one hundred dollars to look our plant all over three times a year, and *guarantee us* against loss from explosion *for three years*, I handed him the money very quick, and just laughed to think that I had found somebody who could do what I wanted, and do it so cheaply. When we got ready to build our great smoke-stack, 90 feet high and 8 feet square at the base, they sent us a beautiful mechanical drawing so that an ordinary mason put up, without any trouble whatever, a great shaft of brick that is not only a blessing to the *engineer*, but an ornament to this part of the town. The drawings and specifications were sent *free of charge*.

Now, all of these men I have been mentioning might be criticised in the same way our millionaires and our trusts and combines have been; but by taking the view of it I have been giving you, it is quite a different matter. You know, of course, I do not believe much in book-agents and street-peddlers; but when a man comes as a representative of a great institution for the relief and safety of humanity, I am ready to welcome him with extended hand, and to thank God for sending him. A. I. R.

## HEADS OF GRAIN

### FROM DIFFERENT FIELDS.

#### THE WAX-SECRETION QUESTION: ANOTHER THEORY.

GLEANINGS for April 15 was a feast to me. I have been interested in the secretion of wax for over two years; and as the subject is being discussed now, I will set forth my theory; thinking probably all the big guns are through, and won't indulge in a relash. I shall be safe in setting forth such an absurdity. Vegetable wax is naturally produced by a flow of sap or water through some broken or natural tissue of the structure of the plant. Air absorbs the moisture, and leaves the crystallized production. Bees gather from blossoms, nectar diluted with water; carry it into the hive, and, if they have no empty cells, they retain the same by forcing the water through the wax-cells, it being thus evaporated by the heat of the bees, leaving a residue, or scale, of wax. When wax is not needed it is removed before the scales are crystallized, thereby giving the bee a chance to continue field labor; also young bees can perform this duty before they are able to go to the field. In this way bees produce honey from nectar, and not merely by evaporating the water by a current of warm air being forced through the hive, on the water-cure theory that air circulation is to evaporate water from the wax. Nectar gathered during a dearth has but little water, and will produce but little wax. If bees need wax and have honey, I think they can redissolve it and produce some wax.

Humboldt, Neb. HENRY PATTERSON.

#### THE VALUE OF AN ANEROID BAROMETER TO A BEE-KEEPER.

I notice what is said on page 298, GLEANINGS, in regard to your aneroid barometer. I wish to ask if that is what I want to foretell the weather in going to my apiary five miles from

home. Will it indicate rain accurately twelve or more hours ahead? H. P. LANGDON,  
East Constable, N. Y., April 23.

[If you understand how to read an aneroid barometer, it will generally give you pretty accurate weather prognostications, several hours in advance, but not always. We depend on them a good deal at the Home of the Honeybees. So much faith have we in them that we once started out to an out-apiary in the rain, because the barometer said it would clear up, although it *looked* as if it would rain all day. It cleared up nice about the time we arrived at the yard. If the barometer indicates rain we do not go out to the out-apiary. To make a barometer really helpful, however, one must study it and watch it closely; and he must bear in mind, too, that the barometer does not always tell *when* the change of weather will come about. One Sunday morning Mrs. Root wanted to know whether it would be safe to go to church without rubbers, waterproofs, umbrellas, etc. I told her I felt sure that none would be needed, for the barometer was rising rapidly. But, contrary to my prediction, we had little dashes of rain on the way to church, and during church time. In the afternoon the clouds went away entirely. On the other hand, sometimes when I feel sure a storm of some kind is coming, it all goes off in a blow, or, may be, just a little rain; but on the whole, the barometer is worth to me many dollars every season in deciding what to do, and what orders to give the workmen. Before the rain lets up I often direct them to harness the horses and get all the tools in readiness, and make preparations for a day's work out of doors. About the time they get under way we are almost sure to find the barometer was right, even though old weather-prophets saw nothing to indicate the clearing-up.]

#### VITALITY OF FIVE-BANDED BEES.

On page 340 you say that your yellow five-banded bees were the first to be numbered among your winter loss. Now, this is according to my observation with a colony of hybrids to which I gave a dollar queen the first of last November. The queen laid but few eggs, and all of the banded hybrids disappeared before the first of March, while there are plenty of the black hybrids yet. Does this not prove that the black bees are hardier and longer-lived? I suspect that another reason why you lost so many bees was selling off too many young bees; and, by having so many old ones to commence the winter with, they soon died and left your bees too weak, and they chilled, even in the cellar. Out of 63 colonies I did not lose one, and I wintered them on their summer stands. Prospects are good at present.

FRANKLIN GARNES.

Kenna, W. Va., Apr. 27.

[Yes, it was the selling-off of so many young bees that helped to make up the loss; but we have sold off as much other seasons and had practically no loss. We lost no colonies in the cellar except three weak ones—one of them very weak.]

#### HOW AND BY WHOM RAMBLER'S SKETCHES ARE MADE.

Will you kindly tell us in GLEANINGS how those small illustrations in Rambler's articles are gotten up? Does he sketch them with a pencil first, and send the sketches to you to be engraved? I am sure it will interest a large number of readers to know all about it. Our bees wintered well. I lost 3 out of 83, and those starved. The rest are strong, and are now just booming. Young bees are hatching in some

hives, and much pollen is coming in. I expect swarms before May 28. HARRY LATHROP.  
Browntown, Wis., April 27.

[Rambler sends us rough sketches or photographs, which we send to our special artist, R. V. Murray, of the firm of Murray & Heiss, of Cleveland. Mr. Murray, from these, makes new pen-sketches that are suitable and fit for reproduction on the printed page. These pen-sketches are then zinc etched, and forwarded to us. Mr. R. V. Murray is a bee-keeper; and as he has Rambler's manuscripts to read, he is eminently fitted to appreciate many of the ludicrous situations. Rambler and Murray together make a *whole team*. Murray & Heiss do all our wood-cutting, and for bee-work they have no equal.]

#### HOW TO MAKE A FEEDER-FLOAT.

The ladies' department makes GLEANINGS complete, and all we can ask for. Mrs. Axtell and yourself have decided on the feeder most suitable for everybody; but I made a cross of thin slats,  $\frac{1}{4}$  by 1 inch, the length of the diameter of the pan feeder to be used, and drove two tacks into the center, thus  $\perp$ . Drop it on the syrup. In feeding a whole month, forty colonies, not a single bee drowned; and the bees suck the boards dry, so there is no wasting, and they can be put away in the pans.

Pittsburg, Tex., Apr. 22. CHAS. DORFMAN.

#### SPACING LOOSE FRAMES WITH PENCIL-MARKS.

*Friend Root*:—At the bottom of Dr. Miller's article on page 211 he speaks of imperfect spacing of loose frames, "even after spending much time on it." Some five years ago I conceived the idea of spacing by pencil-marks across the edge of the hive, just above the frame-rabbit, said pencil-marks to coincide with the centers of the frames. I still use this method, and can space the frames quickly and accurately thereby. E. H. WHITAKER.

La Salle, Ill., Mar. 23.

#### HONEY FROM THE EGYPTIAN ONION.

Twenty-five years ago, in N. W. Missouri I had Egyptian onions that bloomed and bore seed. The bees worked on them more than on any thing else I ever saw. M. S. KLUM.  
Jacksboro, Tex., Jan. 28.

[You have given us two valuable facts, friend K.: First, that the Egyptian onions were known 25 years ago; second, that they yield honey largely when raised on a large scale. I believe they always have more or less blossoms mixed in among the tops or sets. During this present season we have finer and larger Egyptian onions than we ever raised before; and although people are clamoring for them, there is such a demand for the tops we do not dare to sell them now for bunch onions and thus cut off our chances for a crop of sets.]

#### PACKING-CASES A SUCCESS.

I see you wish to learn more of packing-cases for wintering (page 159, GLEANINGS). I have used such cases for six winters. They are the Heddon style (see page 695, 1885), and I don't care for any thing better. ASHER M. COE.  
Coe Ridge, O., March 6.

#### THE UNPLEASANTNESS OF RUBBER GLOVES: HOW TO DISPENSE WITH GLOVES OF ALL KINDS ENTIRELY.

Seeing Mrs. Harrison's article on gloves, I concluded to venture a few words. When I first commenced keeping bees I bought a pair of black rubber gloves; but I soon discarded them, from the fact that the bees would sting the gloves and stick fast, and sometimes suc-



ceed in making me feel it a little; and, when drawn off, my hands would look like cooked pigs' feet; and, if magnified to the size of our earth, they would appear to be covered with mountains higher than the Alps. If you want to get stung on one of your fingers, just tie it up in a rag. That is my experience when I have a sore finger. I work with my bees with bare arms, bare hands, bare face, and no protection of any kind, and seldom get stung; and if every person would keep pure, gentle bees (no hybrids), and study the countenance and movements of the bees, and their nature, they (in my opinion) could do the same.

Oxford, O., March 11. D. A. McCord.

#### THE HAYES FOUNDATION-FASTENER.

I was very much pleased to receive April 1st GLEANINGS, and see the fine illustration of the foundation-fastener; and I was greatly surprised that you gave it such an amount of free advertising in your foot-notes. But I was astonished when I received your postal of the 7th inst., stating that you had credited my account \$5.00 by article in April 1st GLEANINGS. I can't understand it. The GLEANINGS article placed me greatly in *your* debt; and if you had balanced my account I should have considered it just and right.

MELL R. HAYES.

Washington, Kan., Apr. 16.

[When an article or machine is so manifestly good as yours, it is a pleasure to give it a good notice. Our girls scolded considerably when one of the packers proposed to take the only one we had for an order. They hardly knew how to get along without it, and so we had to make them a new one.]

#### STEALING HONEY.

My health has been bad for several years past, and money is hard to get; but I can not have GLEANINGS stop. I send you a clipping taken from one of our daily papers. In addition to the honey taken, I lost 6 fine queens.

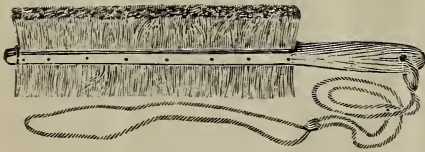
Last Friday night, during the heavy rain storm, same one with a great amount of courage opened ten hives of bees in Mr. Oscar Banks' apiary, and stole about 200 pounds of honey, and left the frames and bees scattered all over the apiary.

Charlotte, N. C., May 1.

O. BANKS.

#### A BEE-BRUSH, AND A GOOD ONE.

Excuse me for making you a present of a bee-brush. I wish you to give it to the readers of GLEANINGS. I used one last season. I think it good enough for the World's Fair. I gave a



SAYAR'S BEE-BRUSH.

friend one last spring, and he also reports it the best he ever saw or used. I have improved it by putting the string on to tie around the waist, and then it is always at hand. It can be made of any rope untwined.

Grafton, Wis.

SETH SAYAR.

[I believe your brush is a good thing. In talking with one of those extensive York State extracted-honey producers, W. L. Coggs, of West Groton, he said he could not tolerate a little yucca brush, nor yet the Davis. "We want something," said he, "that will brush the

bees off a comb with one stroke, or practically amounting to that. Those little toy yucca brushes won't do." Your brush is long enough to take the bees off with one stroke.] E. R. R.

#### BUZZ-SAWS, ETC.—A CAUTION.

If you find any errors, please correct them, for I am laboring under considerable disadvantage in writing, because of a sad accident that befell me one day last week. I have a Barnes saw; and while showing one of the boys how to cut a certain board, the festive saw waltzed into my right thumb, and I compromised by leaving half of the first joint. I have come to the conclusion that a buzz-saw is a dangerous institution, even without pulley, crank, or treadle. In the last number of GLEANINGS you give some plain talk about that supremely cranky and government-mule-cheeky Dr. Hall. The very idea of claiming originality on his part is certainly somewhat absurd and ridiculous, when, to my certain knowledge, it has been in use by the old botanic and hydropathic physicians for more than 50 years. Humbuggery and medical frauds have wonderful cheek and bilious secretions.

ALPHEUS DOVE.

Brookville, Ohio, March 5.

#### WIRE-CLOTH BOTTOMS FOR HIVES IN THE CELLAR. FATAL TO BEES.

In the fall, winter, and summer of 1887 and '88 I was working in the apiary of N. H. Putnam, River Falls, Wis. He had been reading a good deal, I suppose, about large spaces under brood-frames, in wintering bees in the cellar; at any rate, he conceived a plan which he thought would work to perfection. He had me nail together the side and end pieces of a Simplicity hive-cover, and then tack window-screen on top of the frame instead of the cover-boards. These were taken into the cellar, and turned upside down. The hives were brought in, the bottom-boards removed and set on these frames, and fastened there. Twelve swarms in Simplicity hives were fixed this way. There were about 70 swarms put into the cellar that fall. When taken out in the spring, those that were not wired were all right, except one swarm. The twelve with screens fastened underneath were all dead. Upon examination we found that dead bees had dropped down on the screen, covered it over, and molded. The result was, the bees were smothered to death. The cellar was quite damp, so that the mold filled up the spaces between the dead bees.

FRED A. DAVIS.

West Superior, Wis., Apr. 4.

#### A COLONY IN THE OPEN AIR.

I sent to you a year ago and got a catalogue of bee-fixtures, and a copy of GLEANINGS; and I saw in the latter where, if a person saw a colony of bees in the open air, he was asked to write and let you know. I saw a colony of bees on a corner of a rail fence, and they had five combs—three large ones and two small ones—a small one on both sides, as nearly as we could get at it. There was about 15 lbs. of honey and 3 of wax.

WILLIAM HAVILAND.

Laingsburg, Mich., Apr. 8.

#### IS IT THE NAMELESS BEE-DISEASE OR SOMETHING ELSE?

With much interest I have read the articles written on the nameless bee-disease by our best writers and apiarists, its cause and its cure. Now, I wish to ask whether any one ever saw these small brown shiny bees in the spring. If so, they are an exception and not the rule. I never saw this disease (as almost every one

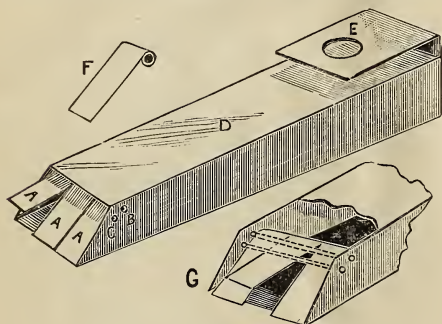
calls it) appear until we had had extremely hot weather; and if we have only two or three days of such weather, then appears the nameless disease. These diseased bees hatch out of combs so full of pollen that there is only a cell of brood here and there. These combs of pollen get so hot during those warm days that those scattering cells of brood which are almost ready to hatch are almost smothered; the young bee is oiled and shiny when it comes from the cell, and such bees are never seen around hives kept entirely out of the sun. Now, friend Root, if you have ever had the bad luck to smother a colony of bees in moving them, you have seen a whole colony of bees that, when dead, looked as if they had the nameless disease. I have seen these so-called diseased bees emerge from the cell, and never could find them so until whole combs of pollen had been stored, and the hottest weather we ever wished for had come.

Jackson, Mich., Mar. 13.

L. J. TRIPP.

#### AN OLD BEE-ESCAPE.

I send you a bee-escape that I have had 29 years. It may, perhaps, assist in developing a better one for present use. Nearly all our sup-



A BEE-ESCAPE 31 YEARS OLD.

posed new discoveries are modifications of something previously in use. We often think we have something new; but looking over the old magazines we usually find that some one has given the plan before, and we have simply adapted it to our method of manipulation.

L. C. WHITING.

Saginaw, East Side, Mich., Dec. 1, 1890.

[The bee-escape which friend W. sent us contains the marks of age, and on one is stamped, "Patented 1860, June 26." Friend Whiting's statement above verifies almost exactly, as you see, what we have said very recently in the editorials in regard to many things being very old, which we sometimes suppose to be very new and original. We understand you to say, friend W., that you used this device for a bee-escape. If so, it rather antedates some new inventions made within the last two or three years.]

#### BEARS AND BEES; HOW THE OLD HONEY-THIEF WAS KILLED.

*Friend Root:*—Perhaps you will remember my letter which was published in GLEANINGS about our experience with bees and bears. It might be interesting to you to know that we had the pleasure of killing what we believe to be the old honey-thief. When we began working at the mill last summer, we found, by the number of tracks, that Bruin was still on deck. But we found it easier to find tracks than bears. One day when my brother John and myself were out prospecting for timber, as we were crossing a small ravine John caused my hair to

rise by excitedly pointing at a large pine-tree up the hollow, and saying it was full of bears. We crept cautiously up behind a clump of brush, and peeked around. We saw an old she-bear and cub perched up in the tree, taking in the surroundings; and, not appearing to think us worthy of notice, John claimed the first shot, and then business commenced. First the old one gave an unearthly groan when a bullet struck her, and reared over backward, making the dry limbs crack as she went down. The cub quickly followed her, and we eagerly rushed up to see our game, and met the big one coming down with a friendly grin on her countenance, showing two rows of gleaming white teeth. Another shot in the head stunned her, and a knife finished her. The cub we found dead where it had fallen, and we felt brave and happy: for, although I have seen a good many bears, these were the first I ever helped kill.

Mapleton, Utah, Apr. 4. E. M. WHITING.

#### A CHEAP HIVE-COVER.

*Friend Root:*—I see quite a number of articles in GLEANINGS in regard to cheap material for hive-covers. I use the Simplicity cover frame, and cover it with  $\frac{3}{8}$  or  $\frac{1}{2}$  inch box-boards for a foundation, then cover that with Fay's manilla roofing-paper. This makes a cheap, light, durable, water-tight cover. I have covers that have been exposed to the action of the weather for three years, and are apparently as good as new. They require painting annually. The company furnish a paint at \$1.25 per gallon. It is about the consistency of water, and a gallon will paint 100 or more covers. I winter on summer stands with an outside case similar to Mr. J. A. Green's arrangement, and use forest-leaves for packing. I do not lose two per cent in wintering.

J. R. MORRISON.

Bates, Ill., Apr. 6.

#### A TEXAS HONEY-PLANT.

*Mr. A. J. Cook:*—I herewith send you an herb that I wish you to name for me. It is a natural growth in our part of the country, and, in my opinion, is a good honey-plant. My bees work on it all day long, just as thick as they do on buckwheat; average height, as per sample sent. It blooms the middle of March, and continues in bloom five or six weeks. To walk through the patch it has a sweet-smelling scent.

W. J. CROWLEY.

Grapevine, Texas, April 10.

[Prof. Cook replies:]

The plant sent by Mr. Crowley, I do not find described in Gray's Manual. Dr. Beal tells me that it is *Vesicaria Nuttallii*. Thus we see that it belongs to the mustard family, and is closely related to mustard and rape. Thus we need not be surprised at the good words spoken for it by Mr. C. It would be interesting to know whether it is a serious weed like mustard. If not, it might pay to scatter the seeds in waste places wherever it would grow. I should be pleased to receive seeds, that I might try it here.

A. J. COOK.

Ag'l College, Mich., Apr. 16.

#### ANOTHER SIMPLE WAY OF TELLING ADULTERATED WAX.

On page 334 I notice that a correspondent wishes to know how to tell adulterated wax. Although the way you give is good, I now give a more simple plan which was told me by a person who was for a long time employed in a large wholesale drug house in Albany. I have tried it frequently, and find it correct, as far as my experience goes; and if it is new to your readers, I hope they will experiment and report.



It is, to simply take a piece of common white chalk or school crayon, which should be reasonably soft, then break your cake of wax that is to be tested, and if the chalk will leave a plain mark on it it is pure; but if adulterated, the chalk will leave no mark. The above may be old to many, but I do not remember of seeing it in print.

T. I. DUGDALE.  
West Galway, N. Y., Apr. 20.

[The above test, if I am correct, depends on the spurious wax being softer than the genuine. While this is usually the case, I believe it is not always true. Nevertheless, your test is probably a valuable one.]

#### HOW TO GET GLASS CHEAP FOR SHIPPING-CASES.

You have always an eye open for saving the pennies of the honey-producer. Now, I would suggest that you let the brother bee-keepers know that old photographers' negatives answer very nicely for glass for honey cases or sections, and they can be had at almost every gallery for very little or for nothing, as they are not used for another exposure, and are a nuisance lying round a gallery. They can be readily cleaned by immersing in lye or ashes and hot water. The most common size is 5x7, and by practical experience I find that 2 inches clear is all the glass that is required for a 1-lb. section. By splitting these 5x7 pieces, two strips and a half are just enough to go across four 1-lb. sections. I have several thousand such negatives that I will sell cheap, or exchange for almost any thing in the line of supplies or queens, a book, or almost any thing.

H. W. FUNK.  
Bloomington, Ill., Apr. 7.

[We are glad to give the above a free notice, as it will help bee-keepers as well as the writer above.]

#### THOSE SPACING-STICKS OF DR. MILLER'S.

In March 15th GLEANINGS I see Dr. Miller has invented a new hive, and he says, "Now for a winter hive. I have invented a stick, in manner and form set forth, of just such size and proportion as to fit in the spaces between the top-bars." Well, Dr. M., I have used that same arrangement for nearly three years, a full description of which you will find in Aug. 1st GLEANINGS, 1890, page 556. 'Tis sad but true; and right here I wish to say it's the best arrangement possible to keep a brood-nest warm in the spring.

E. D. KEENEY.  
Arcade, N. Y., Mar. 18.

[You may be the one we had in mind who first suggested the stick spacer, but we are of the opinion that there is some one before you yet.]

#### HONEY FROM LIMA BEANS, BY THE TON.

By the way, last fall I had my bees within from one to three miles of thousands of acres of lima beans. The consequence is, I am now extracting a ton or two of choice lima-bean honey, which is so thick that I have to warm the combs in my sun-extractor before I can extract it. As it is such a rare article, it occurred to me that you might have customers desiring some of it. I think it is fine. What could you afford to pay for some?

R. WILKIN.  
San Buenaventura, Cal.

[Thanks for the sample, friend W. The quality of the honey is very fair, although the color is somewhat against it. It would hardly be considered first class, although it is very fair. Now, here is an opportunity for bee-men to make capital out of the idea, in the vicinity

of these great bean-fields. The next question is, Does it yield honey to this extent every year?]

Why not use honey with your lemon and ice? Try it. I will take the honey every time. See page 276.

W. J. DRUMRIGHT.  
Sarasota, Fla., Apr. 15.

#### ANOTHER PATENT-RIGHT MAN.

I had a patent-right man to see this morning. He wanted \$10.00 for a right and one hive. I would not give that for a carload.

Jordan, Ky., Feb. 27. J. D. KENNADY.

1. Are drones pure, if reared from a pure Italian queen which mated with a black drone? 2. Is honey gathered from laurel flowers poisonous? With us they grow in the form of a bush, from three to four feet high.

MCWILLIAMS & MILLER.  
Prattsville, N. Y., March 30.

[1. It is generally agreed that they are, although one or two, including Doolittle, think the black drones do affect the blood somewhat. 2. A case of poisoning from laurel, in West Virginia, has been recorded. See "Poisonous Honey," in the A B C book.]

#### HOW TO MAKE HONEY CANDY.

Unlike the majority of bee-keepers, I should be glad to know of the surest means of making my honey candy. Can you give me a hint? Exposed to frost, it candies; but when no frost comes, what is to be done? Is cold the only means known?

J. B. WEBER.  
Paris, France, Feb. 14.

[We do not know of any way to make honey candy except to put it where it is cold. We have heard of placing it in an ice-house to have it candy in warm weather, but we do not know how it turned out.]

#### ADVANTAGE OF DOUBLE-WALLED HIVES.

I have fifteen colonies in double-walled hives, and four in single-walled hives. I winter on the summer stand, for the reason I have no beecellar and can not make one on my ground. I find that the bees in the single-walled hives consume far more honey than those do in the double-walled hives.

FERRIS BURR.  
Braidwood, Ill., April 12.

#### THE DOOLITTLE SOLAR WAX-EXTRACTOR, AND HOW IT WORKS.

I want to thank you and Mr. Doolittle for the description and cut of the solar wax-extractor in November number of GLEANINGS. I have made one, and it works well. Heretofore, whenever I undertook to make any wax I got myself and every thing else smeared and stuck up with it; but with the extractor I have no trouble at all.

W. W. YOUNG.  
Worthington, Ky., Apr. 20.

#### SEASON AND PROSPECT IN FLORIDA.

The season in this immediate neighborhood has been quite poor up to date, as the late winter and early spring flow of honey has been light, and the bees bred up but slowly. As a consequence there was almost no swarming at the usual time. In April we always look for a honey drouth, and I always feed to stimulate the queens to continue vigorous laying. I am feeding now, and am having a few swarms as a consequence. April 7th there came a freeze (the latest on record, I believe), that blasted the saw-palmetto and gallberry blooms on the mainland, so a large part of our May and early

June honey crop has been destroyed. These plants escaped harm, however, on the peninsula east of the river, one and a quarter miles away, so I may get some honey from there. The apiaries on the east side will probably get a good flow from these and other early honey-producers.

Twelve to fifteen miles south, the February and March flow was much better than here, and a fair increase in honey and colonies was secured. The mangrove promises well all along the Hillsboro River, so we hope for a good crop of white honey. I have 127 colonies at this date on the east coast of South Florida.

Hawks Park, Fla., April 30. W. S. HART.

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## REPORTS ENCOURAGING.

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We had a yield of 1800 lbs. of nice comb honey from 17 stands last summer. A. T. CRANE.  
Little Sioux, Ia., Feb. 26.

A case full of 1-lb. sections on two hives. How's that for April 27? HENRY C. AHLERS.  
New Orleans, La., Apr. 28.

### BEES IN THE CELLAR WINTERING WELL.

I finished taking my bees out of the cellar this morning, and I have to report a loss of 2 out of 45 colonies. I put out 25 of them last Saturday. They are in splendid condition now. Elsie, Mich., Apr. 13. R. F. MILLER.

### HONEY-FLOW FROM BLACKBERRY.

The honey-flow is good; very fine grade. I am getting 25 to 36 lbs. per colony from second story, first going over. I believe a large part of it is from blackberry, though it is not called a honey-plant; but, why not? C. P. COFFIN.  
Pontotoc, Miss., Apr. 27.

### BEES DOING WELL.

Bees are doing well here in South Florida this spring. I started this spring with 9 swarms. I now have 17 rousing big ones. They are just piling in the honey by the bee-load, equal to any thing I ever saw at the North.

Auburndale, Fla., Apr. 25. R. MORSE.

### BEES IN GOOD CONDITION.

Bees are in good condition this spring, and the prospect for a good fruit-bloom is flattering. I don't think they will tear out the drone brood on the 13th of April this year, as they did last. They are now working on the elm-blossoms.

West Middletown, Pa., Apr. 11. L. BELL.

### BEES DOING WELL.

Our bees are doing well this spring. I had 22 swarms last fall; lost 6 during the winter; have saved 15 fine swarms this spring, with a good prospect of several more. I took some honey yesterday, April 20. The cap held 18 lbs., and it was entirely sealed, and very nice.

JOSEPH RYAN.

Bayou Barbary, La., Apr. 21.

### BEES ROLLING IN THE HONEY.

Bees are rolling the honey in. I never saw them doing so well at this time of year in my life. We have 11 stands, and I think we shall take 600 lbs. of honey this year. I will let you know how my calculations come out.

EMMA J. KARNES.

Martinsburg, Ind., Apr. 22.

Bees are doing nicely in this part of Texas. Our neighbor, Mr. John, has had three swarms from one hive. M. F. RAGSDALE.

Collinsville, Tex., Apr. 23.

### 332 COLONIES WINTERED IN THE CELLAR WITHOUT LOSS.

Last week I paid a short visit to A. J. Tibbits, Esq., at Downsville. He was removing his bees from the cellars, and it was something to see 332 colonies, all in fine condition. His cellars are three in all. His old one he said had done good service nearly 12 years, and looks all right for years to come. J. C. STAYSA.

Weston, Wis., Apr. 20.

### GOOD WINTERING IN THE CELLAR.

April 7 and 8 I took my bees from the cellar. Out of 70 colonies, only three were dead, and one of them was starved. I have looked them over and find them in good condition, but with very little brood and plenty of stores. I lost one colony out of four wintered outdoors in double-walled hives packed with planer shavings. I should like to correspond with some party in Idaho who can give me information in reference to bee-keeping there.

Buffalo, Minn., Apr. 10. A. C. WALDRON.

### BEES BOOMING.

I think we are on the eve of the best honey crop for many years, and my bees are just booming in the home apiary, which, by the way, is a perfect little beauty. The ground is hard, and covered with white sand. The hives are all under tall oaks, about 12 or 14 inches in diameter. The fresh and lovely green leaves just coming out make every thing grand this morning. Bowing my head in humble thanks to Him who gave me this as well as other great blessings, I am yours truly,

Catchall, S. C., Apr. 13. W. J. ELLISON.

### BEES BOOMING IN FLORIDA.

Through February and March our bees were just booming; had the brood-nests full, and I had to extract to give them room for brood. There were a good many swarms in March. Now they are killing off their drones, and are awful cross. Robbing is so bad I have to use the tent in feeding and working with them. There is plenty of saw-palmetto bloom, but it is so very dry that it yields no nectar. If it doesn't rain soon, a great many bees will starve, and that at a time when we ought to be getting our surplus. J. H. HILL.

Venice, Fla., April 15.

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## REPORTS DISCOURAGING.

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### BEES ALL DEAD.

Please discontinue. Bees are about all dead. I hope to be able to subscribe again soon.

J. B. ARMACOST.

Hollansburg, O., March 24.

### GREAT LOSS OF BEES.

There is a great loss of bees in this section this spring. Trouble, starvation.

Brooklyn, Pa., Apr. 8. LUTHER S. ELY.

### DISCOURAGING.

Please discontinue GLEANINGS, as I have been very unsuccessful. I had 43 colonies last spring. I got two swarms and no honey. This spring I have 9 colonies left. JOHN KOCH.

Columbiana, O., April 9.



## OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

QUESTION 185. Which is better for summer—a single or double walled hive?

Single.

Ohio. N. W.

H. R. BOARDMAN.

Double-walled.  
Illinois. N. W.

DADANT & SON.

A double-walled hive.  
Vermont. N. W.

A. E. MANUM.

A single-walled hive.  
New York. E.

RAMBLER.

Double-walled, the year round.  
Wisconsin. S. W.

E. FRANCE.

My preference is strongly for the double wall.  
Ohio. N. W.

E. E. HASTY.

I have had no experience, except with single-walled hives.

Illinois. N. W. C.

MRS. L. HARRISON.

Single for us. With one apiary, or where wintered out of doors, the case is different.

New York. C.

P. H. ELWOOD.

A single-walled hive is better at any time of the year in a climate like that of Southern or Middle Ohio.

Ohio. S. W.

C. F. MUTH.

I use single-walled hives, summer and winter. When wintered in cellar, I don't believe we need any thicker.

Wisconsin. S. W.

S. I. FREEBORN.

Single-walled hives, by all means. All double-walled hives are a clog upon that kind of manipulation which means success.

Michigan. S. W.

JAMES HEDDON.

I don't know. I think a single one. I'm sure it's best for the bee-keeper, if the bees will do as good work in it.

Illinois. N.

C. C. MILLER.

If it were not for the extra expense I should prefer a double-walled hive, but shading with a board or grapevine answers almost as well.

Louisiana. E. C.

P. L. VIALLOX.

The single is more convenient. The double is somewhat better for the bees. All things considered, I would take them single.

California. S.

R. WILKIN.

I prefer a single-walled hive at all seasons. I then would use a cheap handy packing-case in spring, or in spring and winter both, if I wintered out of doors.

Michigan. C.

A. J. COOK.

A double-walled hive, if properly ventilated, is better for the bees, but not so good for the bee-keeper. I would not have hives permanently double-walled.

Illinois. N. C.

J. A. GREEN.

"I don't know;" but the hives in my apiary that had an outer case, and were packed in chaff and cut straw last season, yielded much more surplus than those in single-walled hives; and I'm so well pleased with the results of one season's trial that I intend to repeat the process the coming season.

Ohio. N. W.

A. B. MASON.

All things considered, I prefer the double-walled hive, especially where there is chaff or fine straw between the walls. Bees in such hives rarely stop work in the sections on account of heat, while they are often driven from the same on many hot days during a copious flow of honey, when in single-walled hives.

New York. C.

G. M. DOOLITTLE.

[It really troubles me, friends, to see such a "disagreement" among the "doctors" on a matter of so much importance. The permanent-wall chaff hive, such as we have sold and illustrated for so many years, was a child of mine, and it is more than likely that I am somewhat prejudiced in its favor. The testimony of friends Mason and Doolittle, it seems to me, is pretty hard to explain away; but we might add, that they are in a northern climate. But then, our friend Viallon, away down south, says even there he would prefer a double-walled hive; and I am abundantly satisfied, that, a great many times at least, a double-walled hive is a real protection from the severe heat of summer. I suppose it depends a good deal upon how the hive is made, and may be somewhat as to whether it is located in the shade or in the direct rays of the sun. Very likely, too, a pent-up locality, say with buildings surrounding so there would be but little wind, may have something to do with it. Now, I think I would compromise the matter by always having both kinds of hives in the apiary.]

## SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

### RAPID MULTIPLICATION AND NEW GENERATIONS, IN GARDENING.

This is a matter that has interested me greatly, especially when there is a sudden and great demand for any particular plant and vegetable. How can we multiply it most rapidly? With strawberries we want to make them put out runners as quickly as possible. The new plants want to be rooted at the very earliest moment, and then they are to be set at work putting out runners in like manner. We have plants of some varieties that have started runners even May 1. By June 1 we expect to have strong plants; and these in a month more will be sending out runners likewise. Another thing, these new plants made from runners during the month of May, if set out in rich ground, will, with the long season before them, make a tremendous growth if they are *just crowded*; and it is these plants, with the Jessie variety, that give fruit in the fall. We are going to try hard for a crop of fall berries this year.

There is another plant (or vegetable, rather) that seems to delight in multiplying its species. It is the Egyptian onion. Last season we filled orders for sets and bulbs that grew at the bottom of big plants, to something like \$40.00. This reduced our stock so that we found ourselves unable this spring to furnish onions for the market-wagon. What we had were on exceedingly rich ground on the creek bottom, and they have made a prodigious growth. In fact, I never saw any thing in the shape of onions, with foliage like them. As we want the sets to plant out, we are in a hurry to have them send up seed-stalks; and, like the strawberries, great vigorous seed-shoots were started so as to be visible May 1. Of course, the Egyptian produces the sets on top of the stalk. Now, I do not know how much matured these top sets must be to grow; but I pulled them off last season, when they were quite green and immature, and set them

in rich ground; and they grew right along "from the word go." Very likely we shall have these sets big enough to grow by June 1; and if they, like the strawberries, have the whole season to grow, in the rich ground, what will they do? I confess I do not know. But I should greatly enjoy giving them the best kind of ground, and all the room they want. We have picked up every thing on our whole grounds in the shape of Egyptian onions, and planted it out, so as to get sets to fill orders and increase our stock. We pulled a *few* of those reserved for seed, and put them on the wagon. The stalks were almost as large as hoe-handles, and half a yard long. People took them greedily for 5 cents for a half-pound bunch. There is something funny about this Egyptian onion. It not only puts in its best energies for the sets at the top of the stalk, but, while it is doing it, small onions are branching out from the root, like the multiplier or potato onions. Now, these sets from the root produce onions not only exactly like those from the top sets, but the bottoms are just what we want to put in beds under the benches in the greenhouse. With but little light and moderate heat, each onion will, in a few months, make a great bunch of onions. When planted in the field, side by side, the bottom sets make a rather stronger onion than the top sets—that is, in the same length of time.

#### GRAND RAPIDS LETTUCE.

It is now the 4th of May, and the Grand Rapids lettuce is *still* bringing 25 cents per lb. During the present season we expect to build a greenhouse almost expressly for this lettuce; and in order to economize space we propose to have beds under each bench, for pie-plant, asparagus, winter onions, and I rather think we can make spinach do tolerably well under the beds, especially if we arrange them so as to let the light come in from all sides. This is an important item, for, after we once go to the expense of a glass roof, it will be quite an object to have one crop above another; and I think we can so manage as to utilize all the space, above and below. This will enable us to get *two* crops from the same greenhouse at the same time.

Our good friend Eugene Davis sends us a copy of the Grand Rapids *Democrat* for April 29, containing the following in regard to lettuce-growing under glass.

#### POSSIBILITIES OF HORTICULTURE UNDER GLASS.

Are the possibilities of horticulture under glass equal to the growth of vegetation in the open air? What kind of greenhouse structures are most suited to plant-growth?

The famous "Kew Gardens," of London, are noted for the magnificence of growth which plants attain; surpassing specimens of the same species found in their native home. The "Jardin des Plantes," of Paris are also noted for the art and science of horticulture, and, like the Royal Botanic Gardens, enjoy a world-wide reputation for the charming splendor they afford. The first botanic garden was established in Padua, Italy, in 1545, and was soon followed by one at Pisa. The success of these gardens was such that, at the close of the eighteenth century, 1640 botanic gardens were established in Europe. All the evidence obtainable proves, without any question, that greenhouse structures, if properly constructed and managed, can be the means of producing the very best specimens of plants.

The construction of a greenhouse should be made with a view of the kind of plants we wish to grow; but, as John Thorpe ably puts it, "First, last, and all the time, to the south." The rays of light in passing through glass lose much of their energy; and the further the light travels before reaching the plants, the slower will be their growth, for the light rapidly diminishes from the roof to the benches. Plants require all the light it is possible to give them. Without an effort to reduce the shade necessary in construction, a poorer development of growth will be

noticed. The effect of light on plant-growth is not so easily noticed by the amateur. One unaccustomed to greenhouse plants will invariably mistake height and general appearance upon entering a shady house for the darker green, stockiness, and weight of leaf found in lighter structures; and it is only when plants are put side by side that a marked difference can be seen. Peter Henderson has said, "The best house for lettuce-growing should be built to the south, and nearly flat."

#### EFFECTS OF LIGHT AND SHADE.

Progressive greenhouse men are continually reducing the shade by using larger panes of glass. Mr. Knight, of London, said to be an unquestionable authority, when speaking on the effect of light or shade, says: "The massive rafters, framed sashes, inferior glass, inserted in small fragments, with numerous overlaps, liable to be choked with dirt, intercept a large portion of the solar light and heat in ordinary glass houses." The new system of butting the ends of glass together with white lead, when glazing, makes such an air-tight house that I can not recommend the system for lettuce culture. So tight are these houses, that a tobacco smoke made in the evening will be quite thick the next morning; and one hour of ventilation is necessary to change the air in such a house and get rid of the accumulated smoke. I have seen a house glazed in this way like a "wardian case," taking up moisture from the soil in the broad sunshine, and falling in thousands of sparkling drops. Carnations can be made to grow in such a house, if air in abundance is given every time the opportunity affords. I believe roses and callas would delight in such a moist atmosphere, but lettuce soon rots in the stalk when it has made such a dense growth. I have not syringed carnations for months in this house, and there is no sign of red spider. Any morning, unless the soil is dry in the house, a magnifying-glass shows the carnation leaves to be covered with dew. The best lettuce I have grown is in a house glazed in the old style of lapping the glass. This house is so full of openings that tobacco smoke escapes in twenty minutes.

Roses refuse to bloom during the winter months in houses running north and south, or bloom so seldom as to make their culture unprofitable. Face the same structure to the south, and a constant cutting of bloom can be secured. Light, also, has an influence upon the development in color. The same variety of roses grown in sunny or shady houses, when placed side by side, appear like different kinds. Soils, also, change the color of flowers. A heavy soil in a shady house will produce flowers about the same shade as light soil in a sunny house; and to get the fullest development of green, glossy foliage, thick leaf and pure color for roses, they should have a heavy soil and a sunny exposure.

#### GLASS FOR LETTUCE.

That most successful lettuce-grower, Mr. Eugene Davis, once asked me if I did not think that a house facing east and west is the best for growing lettuce. I assured him that I was in favor of a south slope for any thing; for, although I was obliged to admit that, from March 1, the east and west is the best, a better average is secured in the north and south three-quarter-span houses, because I could produce a better article during the winter months; and if not quite so good later, on account of a higher temperature, a good merchantable article is a certainty. The house facing south gets all the sun there is during the shortest days; and as they lengthen, and the sun rises more to the east, the south-slope house gets more shade, but a good average amount. Our houses, facing east and west, have now, April 20, a large amount of sunshine, and air must be given as early as 6 o'clock in the morning, while the south house can be closed until 8. Another advantage in the south house is the opportunity to do the watering morning and evening, as the oblique rays of the sun allow four or five hours a day for this work, which can not be found in the other houses. The light admitted to the south house increases in intensity from 9 to 12, and is strong for six hours. This bright light, causing a stocky growth, allows the admittance of a large quantity of air without wilting the plants. Light is heat. The heat from the sunlight is what we want, using the artificial to keep out the frost. The less fuel we burn and keep our houses warm with solar light, is not only economy in fuel, but economy in plant-growth. I am fully convinced, that the greatest success in horticulture under glass depends more on having our structures built expressly for the different plants under cultivation



than in all other skill combined. The ideal house for lettuce and carnations should be built with permanent rails for glass to the north, one third pitch, and all framed sashes to the south, ready at a moment's notice to slide off easily. In this way no whitewash would be needed, as an abundance of air could always be had, and the sun's rays would not be too hot through the glass for the north bench. Whitewashing the glass should be delayed always as long as possible, as the darkness and moisture invite that dreaded enemy, the aphid. Sun and air are death to the green fly, and life to plants.

#### THE QUESTION DISCUSSED.

The subject was open, and many questions were asked and answered by those who had had experience. It seemed to be the prevailing idea by those not accustomed to glass that it is something wrapped in a mystery. This is not so. Any one who has common sense can manage a greenhouse, and the secretary was sorry to see so few horticultural structures in Grand Rapids. Mr. Smith, when asked how he kept up the fertility of the soil, replied that he used ground bone and other fertilizers. Tobacco smoke was used to destroy the green fly, but a decoction of tobacco-water was generally used, as it lasted longer than a smoke, which was made often too strong for the plants for so short a time to kill the fly. Pyrethrum in water will kill the aphid, but is an expensive method. Mr. Smith was asked which size glass he preferred, and replied that 18x20 was his choice, and some houses he had erected when he began would be pulled down during the coming summer and rebuilt with large panes. Replying to the extra hazard on account of hail for the larger panes of glass, Mr. Smith said the Florists' Association have an insurance clause for hail.

#### ONIONS FOR FALL PLANTING.

For a good many years Landreth's people have advertised an onion which they call the Bloomsdale Pearl; but in their catalogues they always say they are suitable only in the extreme South, for fall planting. In reading the accounts of this immense onion, the sets of which are planted in the fall, I have for years been longing for something similar that could remain out all winter in our climate. I have before remarked, that we succeeded in getting beautiful onions of this same variety by starting them in the greenhouse. Well, last fall, in Johnson & Stokes' quarterly price list they gave a picture on the back cover, of an immense onion called the American Extra Early Pearl. Their description is as follows:

This remarkable onion is the earliest and best of all the white varieties, far surpassing Silver King, White Tripoli, and other sorts in great size, thickness, rapid growth, bottoming, and keeping qualities. It grows to enormous size, of pearly-white color, the outer skin having a most showy, waxy appearance, flesh of a pure snow white, and flavor so mild that it can be eaten like an apple. It grows with wonderful rapidity, reaching the first season a fine large size from seed; and if sets are planted out in the fall, either in the North or South, they will reach the enormous size of six to seven inches diameter, frequently weighing three to four pounds each, long before onions of any other variety reach sufficient size for market. Hundreds of market-gardeners to whom we supply sets every fall completely control the early markets with this profitable variety. A splendid keeper, succeeding everywhere. Our seed and sets of this wonderful variety are Philadelphia-grown.

Now, the thing in the above description that attracted my attention particularly is this: "If sets are planted out in the fall, they will, in the North or South, reach the enormous size of six or seven inches in diameter." They were advertised for September and October planting. On the strength of the above I sent at once for a peck of sets. They were carefully planted on good ground, came up at once, and made a fine growth. At present writing I can not discover that a single one of them suffered over winter, although they were entirely unprotected. Of course, last winter was unusually mild; but the weather this spring has been very trying to strawberries and spinach, and other things of a

similar nature that were wintered over outdoors. The onions, at present writing, May 7, are nearly the size of hens' eggs, and growing nicely. What astonishes me is, that Johnson & Stokes do not make more of a fuss about it, if they have really got a large onion that will keep over winter in the ground *north or south*. If it really succeeds, as it seems to bid fair to do, it will give just as good results, or better, than the "new onion culture" of which so much has been said; and the work can all be done in September and October, when time is not usually worth so much to the market-gardener as it is in the spring. By the way, there is something exceedingly interesting about this wonderful hardy vegetable, the onion. New things are coming up so constantly that quite a little book might be written, giving the full history and peculiarities of the different members of the onion family. Another thing that makes it *doubly interesting* is, that Bermuda onions are to-day quoted at \$2.75 per crate. The crate does not hold a bushel, and the onions are comparatively poor things at that. I said to our boys on the wagon, "Why, you can never sell such onions, and get your money back, in the world." But they replied, "Yes, we can. We know they are not very attractive looking, but people must have dry onions of some kind." Now, just think of it! At these enormous prices, and the market not fully supplied, we have sets of beautiful white onions that may be planted in the fall, and will give onions very early next season, *six or seven inches in diameter*—at least, so Johnson & Stokes say; and our own, out in the field, look very much as if it were, at least to *some extent*, true.

#### BURLAP COVER FOR GREENHOUSE.

Send the burlap immediately, as I need it to cover my greenhouse. J. DALLAS.  
Sharpsville, Pa., Dec. 3.

[Thanks for the idea, friend D. Burlap is cheap, and would doubtless keep out a good deal of frost.]

## OUR HOMES.

Give, and it shall be given unto you.—LUKE 6: 38.

I have long wanted to talk more on this matter of giving; but I confess my faith has been somewhat small that it would be received in the right spirit, especially when there has been so much discouragement, and, in many cases, absolute poverty, among bee-keepers. I feared many of the brethren would say, "Brother Root, it may be all very well for *you* to give; but how are we, who have hardly the means to get along, going to give to *others*, or to missions, or other foreign work?" Then I thought of telling you that one great reason why your resources were so cramped was because you did not *believe* nor *heed* the little text I have started out with. While I had the matter in mind, our good pastor, Mr. Norman Plass, gave us a sermon containing so many of the right texts and so much exhortation in just the line I wanted to talk on, that I have decided to give it to you entire. The text he has chosen is not exactly the same as my own; but it is, nevertheless, in the same line, as you will notice.

Remember the words of the Lord Jesus, how he said, It is more blessed to give than to receive.—ACTS 20: 35.

"THE WORDS OF THE LORD JESUS."

We often wish that we had a more complete record of the words and deeds of Christ. What

did he say and do during his boyhood—during those years of young manhood, before he entered upon his public ministry? What were the "gracious words that proceeded out of his mouth," at which his old acquaintances marveled upon his return to Nazareth? If we accept the account of the woman taken in adultery, what was it his finger traced when he "stooped down and wrote upon the ground"? Amid the divergence of opinion as to what prophecies of the Old Testament are Messianic and what are not, who would not be delighted to know which ones he chose when, walking with the two disciples to Emmaus, he "began at Moses and all the prophets, and expounded unto them in all the Scriptures the things concerning himself"? What magnificent Sunday reading that expository sermon would make if we only had of it a stenographic report! How thankful we should be that *four* writers instead of *one* were inspired to record the life and words of Christ, so that we have many an event, many an utterance, preserved from the rapidly disappearing tradition, that we should not have had were only one moved by the Spirit to perform this deed of love! Suppose the sacred Narrative had been closed before John had written his Gospel—who can measure the extent of the loss we should have sustained? What if that glorious chapter of comfort, the 14th, or that beautiful chapter of prayer, the 17th, were not recorded—would not the burden of sorrow and discouragement have rested heavier upon the world? It is now agreed that the 21st chapter of John's Gospel was a *later addition*, written by John himself, no doubt, yet some time after the rest of his narrative was completed. How, at the very thought of the possibility of having lost it, our hearts throb with thankfulness for the preservation of our Lord's conversation with Peter, therein contained, when Jesus forgives the denial and restores him to the discipleship! It has proved to many the magic touch that has restored courage to their fainting hearts. But John by no means *completes* the record of Christ's words and deeds. In the last verse of this last chapter he says: "And there are also many other things which Jesus did, the which, if they should be written every one, I suppose that even the world itself could not contain the books that should be written"—a hyperbole, to be sure, and yet giving us a hint at the vast mass of unrecorded tradition, still familiar to the disciples' minds, but soon to disappear.

With the close of John's record a feeling of sadness steals over us at the thought that, in the remainder of the New Testament, we are to find recorded no more of the direct utterances of Christ. Next to this Fourth Gospel stands the book of the Acts of the Apostles. It is *their* deeds and words, and not Christ's, that we are now to read. It is no longer the light, but the witness to the light—no longer the face-to-face vision, but the reflection—the echo, and not the voice itself—that we shall see and hear.

But as we read on, how our hearts pulsate with gladness to find among the jewels of this precious book one *royal gem*. To the elders of the Ephesian church Paul speaks. The words that he addresses to them are golden words, full of self-sacrifice and zeal in the Master's cause; but suddenly from amid the gold there scintillates forth a sparkling gem, hitherto unseen by us, but polished and set by Christ himself. "Remember the words of the Lord Jesus," says Paul, "how he said, *It is more blessed to give than to receive.*" With these words he closes his address; and we search the remaining books of the New Testament in vain for another gem from the lips of Christ when here on earth.

This is, indeed, a royal saying, rescued from oblivion, and added to the abiding treasures of the church. It is a saying worthy to proceed from the lips of the Son of God. "It is more *blessed* to give than to receive." Or, the words might be transposed in the order that they stand in the original Greek: "Blessed, or 'bliss-giving,' is it to give rather than to receive." "Happier is the *giver* than the *receiver*," is no doubt the thought that Christ intended to impart—he who *gives* receives the greater blessing.

"King Nean loved riches, so he shared them with his people," said Mencius, the Chinese sage, 350 B. C. When depressed, and at the ebb of fortune, Mark Antony cried out: "I have lost all, except what I have given away." Thus reads an Italian inscription: "What I gave away I saved; what I spent I used; what I kept I lost." These are truthful sayings, the product of a philosophical bent of mind, and underlie the declaration of Christ that "it is more blessed to give than to receive," but fall far short of the Christian conception of those words. Let us look at another class of expressions. "I never knew how it was," said Richard Baxter, "but I always seem to have the most come in when I give the most away." Says Dr. Taylor: "This is ever the divine law: We get by giving. We must sow if we would reap; we must open our hearts in love to others, if we would have God's love shed abroad in our own souls." Says George MacDonald, in "Mary Marston," "In giving, a man receives more than he gives, and the more is in proportion to the worth of the thing given." Says Gladstone, in a recent article in the *Nineteenth Century*: "He (who gives) will learn as to giving, that, like mercy, 'It blesses him that gives and him that takes;' nay, that, done in a certain manner, it is even a surer and a larger blessing to the first than to the second." The expression of one other is, that "in this world it is not what we take up, but what we give up, that makes us rich." These are Christian truths, based upon such declarations of Scripture as these: "Give, and it shall be given unto you" (Luke 6:38). "He that hath pity on the poor lendeth unto the Lord; and that which he hath given shall he pay him again" (Prov. 19:17). "He that soweth sparingly shall reap also sparingly; and he that soweth bountifully shall reap also bountifully. Every man according as he purposeth in his heart, so let him give; not grudgingly, or of necessity; for God loveth a cheerful giver. And God is able to make all grace abound toward you; that ye, always having all sufficiency in all things, may abound to every good work; being enriched in every thing to all bountifulness" (II. Cor. 9:6, 7, 8, 11). All this, and much more we might quote, has reference to a *return in kind that God will give to those who give*. This is a Christian truth, because the non-Christian world conceived not of it, because the non-Christian mind receives it not to-day. "What a man can keep from giving is so much gain," is the maxim of the world—"It is more blessed to *receive* than to *give*." But the world has been convinced that it *actually pays* in the end to observe one day of rest in seven; that it actually pays to take the *good* grain from the granary and scatter it forth upon the earth; and why should not the world be convinced that it actually pays to give a portion of one's *income*, as well as of one's *time*, to the Lord? and that it actually pays to scatter seeds of *benevolence*, especially when God has declared of this very act: "He that soweth sparingly shall reap also sparingly; and he that soweth bountifully shall reap also bountifully"? If God can multiply a man's income by *two*, there is no reason in the world why he can not multiply it by *ten*. In a thousand ways is



God able to speed the forces of increase. "Give, and it shall be given unto you; good measure, pressed down, and shaken together, and running over, shall men give into your bosom. For with the same measure that ye mete withal it shall be measured to you again." Don't you believe that? Can't you trust God's word for that? Giving to the Lord is but *lending*. The security is good and the interest is compounded monthly. But although the returns are so sure and great, this would not make a very good business to set up in, if you had no other. You expect returns in business. But in giving, "Do good, and lend, hoping for nothing again, and your reward shall be great," says Christ. Giving to the Lord *because* it pays does *not* pay. An old Scotch farmer attended a missionary meeting, and, although little accustomed to giving, after considerable struggle, and especially with an eye to the promised returns, he ventured to cast a shilling into the box. On his journey home that beautiful moonlight night he saw lying in the road a shining shilling, which he was not slow to pick up. On reaching home he told of the meeting, related how the speaker had said that, if a man gave to the Lord, the Lord would give it back, and added: "Now I know that these men tell the truth, for I gave a shilling to the collection, and coming home I found one in the road." One of the servant-men, having listened to the old farmer's account, at length said: "Now, master, do you think that ye understand it right? I'll tell you how I think it is. You see, you gave the shilling because you expected to have it given you back; and ye see, master, the Lord loveth a cheerful giver, and so he did not like your giving that way, and I dare say he just thought he would not have your money on that principle, and so he threw it at you on the road." We can not invest money in this way, looking for the returns. It is not so much in *faith* nor in *hope* as in *love* that we must give to the Lord. Give in the spirit of Him who, "though he was rich, yet for our sakes he became poor, that we through his poverty might be rich"—"wherefore," we read, "God hath highly exalted him." If we give as Christ gave, "hoping for nothing again," in the spirit of loving self-sacrifice, our reward will be great. "The love of Christ constraineth us."

Here is a man who says: "I believe all that, and by and by, when I get a start in the world—get out of debt and a little better fixed—I intend to practice it. For the present, I beg thee have me excused." Very well! your case is reported. The Lord, who has kept you all these days, so that you have wanted no good thing, writes in his book of remembrance, opposite your name, these words: "Forgetful. He hasn't all he wants, and refuses to be thankful for what he has. He will give nothing this year for the advancement of my cause, but has determined to forget me. This year I will forget him." Impossible? Oh, no! The Lord can very easily forget you for a year or two, if you choose not to remember him. How much of a "start" will you get in the world then? If you fail to sow, how much will you reap? Christ says: "He that soweth sparingly shall reap also sparingly."

Here is a man who says: "Business is dull, and times are hard. I can scarcely make both ends meet. I must give less to the church this year. Report me for just half what I gave last year, and I don't believe I can pay that." Very well! your case is reported. The Lord, who has prospered you hitherto, so that no evil has befallen you and no plague has come nigh your dwelling, writes in his book of remembrance opposite your name: "Ungrateful. He complains of the good times I have given him

as 'hard times.' This year I will let him regulate his own times. I will let sickness come, and expenses multiply; I will turn his business to another's account. He gives me less; he shall have less." Impossible? Oh, no! "He that soweth sparingly shall reap also sparingly." From an *economic* point of view, the house of God is a poor place at which to begin to economize. You can not afford to feed up the seed-corn.

Here is a man who says: "I will give as much to the Lord's work this year as I gave last, but I can't afford to give more." Very well! The Lord writes upon his page of remembrance, opposite your name: "Satisfied. Let him receive as he gives. Let his blessings not multiply; let his harvest not increase." Impossible? Oh, no! "Whatsoever a man soweth, that—that, and no more—shall he also reap."

Here is a man who says: "The church is growing. The expenses must necessarily increase. The demands of the Lord's work are greater to-day than ever before. I have more love for the Lord's work than ever before. I must increase my contribution this year. I have received freely, freely will I give. I will pay cheerfully and promptly, that the Lord's good work may go on." The book of remembrance is taken out, and the Lord writes these words: "Faithful. Well done. Thou hast been faithful over a few things, I will make thee ruler over many things. Thine increase shall be great." Impossible? Oh, no! "He that soweth bountifully shall reap also bountifully." "There is that scattereth, and yet increaseth." "The liberal soul shall be made fat; and he that watereth shall be watered also himself."

But I hear some one say: "The little I could give—what difference can it make to the Lord? If the cattle upon a thousand hills are his, and the silver and the gold are his, why doesn't he use *them* as he will?" What if he should take you at your word? The "cattle upon a thousand hills" includes *your* cattle, and "the silver and the gold" includes *your* silver and gold. It is a very easy matter for the Lord to transfer these to some one who is ready to yield them for his service. Would it be right? Is it not lawful for him to do what he will with his own? Why should he do it? Because "there is that withholdeth more than is meet, but it tendeth to poverty." The little God has given you is not yours to control, but yours to consecrate. As Dr. Dale puts it: "Christianity really teaches us to say: What seems *thine* is not *thine*, and what seems *mine* is not *mine*; whatever thou hast belongs to God, and whatever I have belongs to God; you and I must use what we have, according to God's will." It may not be much you can do; but

"Every smallest hand can lend some kind of helpful touch,  
Lift the weight a little, and the many make the much."

Your little is *little* in *your* hand, but *great* in *God's* hand.

But we have not yet touched the deepest meaning of the words. "It is more blessed to give than to receive." We have only taken into consideration the return in kind that the Lord will make to those who give to him. There is a return not in kind. The best things in life can not be bought, and the best rewards of life can not be measured by any money standard. Christ did not say, "It is more *profitable* to give than to receive; that would have been true, but he uttered a greater truth than that—"It is more *blessed* to give than to receive." Who has not experienced the blessedness of giving! Who has not felt the joy that comes with the sense of having lightened the burden of human

want, or of having been able in this way to further the cause of Christ! A professor, who was called "the students' friend," because of his helpful kindness, was one day walking with one of his pupils when they came across the shoes of a poor man who was working in the field near by. "Let us hide them, and have some fun," said the student. "No! that wouldn't do," replied his friend. "We must never amuse ourselves at the expense of the suffering of others. You are rich. Suppose you put a crown piece in each of the shoes, and then we will hide ourselves and see what the poor man will do." This was done. Presently the poor laborer came from the field, and, finding his shoes, put his foot into one of them, but, feeling some hard substance there, quickly removed it and took out the crown. Looking about in surprise, and seeing no one, he put it in his pocket. When he went to put on his other shoe, he found the other crown. This was too much for him, and he fell upon his knees and thanked God for the unknown giver who had thus lightened his burdens, for now Mary, his sick wife, could have the medicines she so much needed, and his starving children could have bread. The young man was deeply affected, tears stood in his eyes. "Now," said the professor, "are you not better pleased than if you had played your intended trick?" "O dearest sir!" answered the youth, "you have taught me a lesson I shall never forget. I feel now the truth of the words which I never before understood—'It is more blessed to give than to receive.' We can not always stand by and see the good we do; but God knows, and his ministering angels come at his bidding and touch our hearts with joy. It is then that we feel the blessedness of giving. It is then that we understand what men mean when they tell us that it is a *luxury* to give. Men have sometimes said, at the close of life, that they would give all they were worth if they only knew that they had been the means of saving a single soul. Do not wait, but give now, as the Lord has prospered you, and you can know it. Every dollar you give toward your own church contributes to that end. When you have given ninety dollars to foreign missions, you have furnished the means of bringing one soul into the kingdom. Will not the glory be yours? Give forty dollars to sustain a Bible-reader one year, and who can tell the number of souls you may save? 'A cup of cold water, given in the name of a disciple, shall not lose its reward.' A little child gave an abandoned woman a flower that reminded her of home and brought her at length to Christ. You pray for the prosperity of Zion, but 'prepaid prayers' are the best. Letters in large numbers reach the dead-letter office because they are not prepaid. Is not this the reason why so many of our prayers go astray, and we receive no answer back? It would make a good proverb, if it is not already one: 'He *prays* best who *pays* best.' The woman who cast in her two mites; Mary, who anointed her Lord's feet; Sarah Hosmer, the factory woman of Lowell, who five times gave fifty dollars that Nestora might have the gospel herself living in an attic; these are among the number who have felt the blessedness of giving, and whose prayers rise like sweet incense unto God.

But what if you receive no return in *kind*, and do not realize the *blessedness* of giving? Is there no reward? To be sure, if you give in the right spirit, great will be the return, and the reward of blessedness, in the world to come. "Giving to the Lord," some one has said, "is but transporting your goods to a higher floor." We sometimes speak of the "surprises of heaven." I believe the greatest surprise will be to

find how much Christ esteems the little deed, the little gift, in his name. "He that receiveth you receiveth me." "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me." A poor man, passing homeward one night, pitied a poor soldier shivering in his sentry-box because of the intense cold, and pulled off his overcoat and gave it to him, and started home on a run. When, not long after, the poor man lay upon his death-bed, he had a vision of Jesus one night. "Why!" he exclaimed in surprise, "you have my coat on." "Yes!" the Master replied, "it is the coat you lent me that cold night when I was on duty and you passed by. I was naked, and ye clothed me." Christ has reference to this future blessedness when he says: "When thou makest a feast, call the poor, the maimed, the lame, the blind; and thou shalt be blessed; for they can not recompense thee; for thou shalt be recompensed at the resurrection of the just." Paul has reference to this when he says to Timothy: "Charge them that are rich in this world . . . that they do good, that they be rich in good works, ready to distribute, willing to communicate, laying up in store for themselves a good foundation against the time to come, that they may lay hold on eternal life." "They *have* their reward," Christ said of certain ones; but it is true of him who gives in the spirit of Christ, that his greatest reward is to come. To use the words of another, "If a man gives to have the reputation of giving, he commonly gets that reputation. He ought to be satisfied. He has given for a certain reward, and has received it. He has no more right to look for another reward hereafter, than a man who sells a barrel of flour for an agreed price has to look for a vote of thanks or a present of honey from the family using the flour. One thing or the other—cash or credit—when you make a sale. If you get the cash, the account is balanced—closed. But if you look for nothing now, and receive nothing now, you may expect a return by and by. There's all the difference here between selling grain and planting grain. Selling grain for cash, you get your return at once. Planting grain, you look for your return in the harvest. What you bury out of sight of men, in your quiet and trustful giving, God watches and cares for, and will give an increase to, which shall whiten the field before you."

Ben Adam had a golden coin one day,

Which he put out at interest with a Jew.

Year after year, awaiting him, it lay,

Until the doubled coin two pieces grew,

And these two, four—so on, till people said,

"How rich Ben Adam is!" and bowed the servile head.

But Selim had a golden coin that day,

Which to a stranger asking alms he gave,

Who went rejoicing on his unknown way.

Ben Selim died, too poor to own a grave;

But when his soul reached heaven, angels with pride

Showed him the wealth to which his coin had multiplied.

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### SOME KIND WORDS IN GOOD EARNEST.

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"ON THE FENCE," ETC.

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Mr. Root:—We have just received our new number of GLEANINGS. I have read your beautiful and masterly article, "Thou God seest me." I never read any thing like those articles. I think perhaps you yourself do not appreciate how unique in literature they are. I also hope you are taking the precaution of saving copies of all of them. I should think they *must* be called for, to be published in book



form. They are far too valuable to be buried in a magazine. They are so thoroughly practical, and such a blessed absence of doctrine in them, they come right down to and tackle firmly the common every-day occurrences of our lives, which is just what is wanted, but what all other sermons I have ever read seem most industriously to shun. The episode of the oranges, I should think, would soften and lead in the right path many a heart now "on the fence" (as you were), so powerful is what comes from the heart.

Now, Mr. Root, we are on the "ragged edge" with worry. Our bees *must* swarm soon. The hive is overflowing, and we have no foundation. Oh dear! could you not send the foundation ordered below as quick as lightning? The frames are not quite so badly needed. We could not get the money to send before to-day, or would have sent before. I wish to know how much per thousand you will supply me labels like the inclosed pattern. I want them to label eggs. They would have to be very cheap indeed, or I could not make any thing. They need not be cut. They might be in sheets, and I could cut them. They need not have dividing lines. The great thing is the number I could get for a dollar. They do not need good paper; size, half an inch to an inch. Please let me know as soon as possible.

L. S. HAYDEN.

Lyndon Station, Wis., May 11.

[My good friend, I do not know how to thank you for your kind words; but I am sure you are greatly prejudiced in my favor. I suppose there are certain things and certain people that seem to appeal particularly to certain individuals; and my fashion of pleading for Christ Jesus happens to be in a peculiar line that comes home to you particularly. I hesitated somewhat about using such a letter as yours, evidently not intended for print, especially after the severe criticisms I have lately received. However, I feel that your words may do others good as well as myself. Yes, dear friend, I suppose there are thousands of young people, and may be older ones, who are "on the fence," exactly as I was when just coming out of my teens; and a great responsibility rests upon us who are older, and who have found that the key to the only true and abiding happiness is to make sure that, when these young people get down off from that fence, they get down on the right side—on the side that prompts them to live for others; or, if you choose, on the side of Christ Jesus. When I wrote under those words, "Thou God seest me," I felt in my heart that I had a message for *some* one; and I had a bright faith that the message *would* do good. Now, who do you suppose brought the first fruits of that message? None other than my own daughter, who is away at school. She, too, is eighteen; and (when I did not dream of it) my earnest pleading went home to her young heart, and stirred up in her a resolve to break away from self, and live for others, in a way perhaps she had never felt before. I really wanted to print some extracts from that letter; but I knew so well that both she and her mother would object so emphatically, that I lacked courage to even ask permission.

And now, my friend, you have aroused my Yankee curiosity in regard to labeling eggs. By some means you failed to inclose the pattern, and I have been puzzling my brains to know what it is like. Are you going to put a label on each egg as soon as it is laid, and say, "This egg was laid on the morning of May 15th"? You see, the grocer could get an extra price for the "recent" ones.

Your foundation went by express within one hour after your letter was opened, and your frames will follow by freight at once. You see, we are up with orders now, or very nearly so, and we just enjoy the fun of getting goods off before our friends have time to expect them. If the railroad companies would only do *their* part, how nicely we should get along!

## TOBACCO COLUMN.

GOES SECURITY FOR A FRIEND.

Please send to A. L. Stuart, Ottawa, Kan., a smoker. I am a subscriber to GLEANINGS, and will pay for it if he commences again.

Ottawa, Kan., Apr. 20. W. F. STUART.

QUITS SQUARE OFF.

If you will send me a smoker I pledge to quit the use of tobacco; and if I break the pledge I will pay for the smoker. GEO. W. READER.

Lynn Haven, Va., May 1.

BREAKS HIS PLEDGE.

Inclosed please find 70 cents to pay for the smoker which I ordered from you for William Bergmann, for quitting the use tobacco. He has broken his pledge. G. W. T. REYNOLDS.

Poag, Ill., April 2.

Send a smoker to Mr. A. Kyger. He has quit the use of tobacco, owing to articles published by you; and if he is ever foolish enough to use the vile weed again he will pay you for the smoker. L. C. HUGHES.

Tucson, Ariz., Apr. 23.

Will you please send a smoker to my brother, John F. Post? I have given him a hive of bees, and he wants a smoker. He has stopped smoking tobacco, and agrees to pay for the smoker if he ever commences again, and I will see that you get pay for the smoker if he breaks his promise. S. B. POST.

England, Pa., March 20.

I have used tobacco for thirty years. I have not used any in six months; and as you offer a smoker, I should like one; and if I ever use tobacco again I will pay you the price of the smoker. Geo. M. Bostick has a few hives of bees, and has quit using tobacco also. I pledge myself to pay for them if we ever commence again, and will pay you two dollars for them.

Elora, Tenn., March 11. J. A. SMITH.

A friend of mine, Clarke Denny, Cordeva, Ky., has signified his intention of quitting the use of tobacco; and seeing your advertisement promising a smoker to all who quit, he asks that I have one sent to his address. He promises that, if he ever begins the use of the weed again, he will pay for the same. But, never fear. I will watch him close; and if he ever begins I promise to remit the price of the smoker.

Morgan, Ky., March 2. HENRY C. CLEMONS.

I am so much pleased with the copy of GLEANINGS that you sent me that you will find in my order \$1.00 for it a year. I saw in another copy, that any person who had stopped using tobacco with the expectation of never using it again would get a smoker; therefore I think I am entitled to one. I will promise upon my honor to pay for it if I ever use tobacco again.

L. H. DECKER.

West Millbrook, Mich., Feb. 21.

My husband had been using tobacco for nearly twenty years; but through the influence of the Tobacco Column he has quit it entirely. He has not tasted it for almost a year. A friend asked him one day how it was he quit the use of tobacco. He said, "I can thank A. I. Root for it." He has been a reader of GLEANINGS for nearly four years. He has now 45 stands of bees. Please send me a smoker. Should he again use the weed I will pay for the smoker.

Mrs. LIZZIE BEEBE.

Point Pleasant, Pa., Feb. 23.



Honor the Lord with thy substance, and with the first-fruits of all thine increase; so shall thy barns be filled with plenty, and thy presses shall burst out with new wine.—Prov. 3: 9, 10.

We give in this issue, 16 pages extra as usual.

F. H. & E. H. DEWEY have already paid 20 per cent duty on their last importation of queens. For further particulars in regard to the matter, see Prof. Cook's article elsewhere.

By a letter just at hand, we learn that they are having very trying weather for bees in England, and that cold east winds have prevailed for weeks. A great number of stocks have died.

We notice that the Wisconsin State Legislature, on the 14th of April, passed a bill to suppress foul brood among bees, with a provision for a State foul-brood inspector, and an appropriation of \$500 for the purpose.

HUTCHINSON says, in the *Country Gentleman*, page 357, that, next to the Heddon divisible brood-chamber, he would prefer the eight-frame Dovetailed hive; that is, one of that style, with a loose bottom and flat cover. "It is really an excellent hive," he says.

J. M. JENKINS has sent us a neat little mailing and introducing cage. It is quite similar to the Benton, only it has two compartments instead of three, and, perhaps, for ordinary distances it will do very well. A one-cent stamp is all that is required to send it to any part of the United States or Canada.

IN spite of all we can do, the new edition of our A B C may not be out as soon as the old one is exhausted. The new edition, while it will be distinctively a work for beginners, will contain more matter for the advanced bee-keeper. Many whole subjects are being entirely re-written, and some entirely new ones are being added.

THE *British Bee Journal* is now having a series of articles on mounting microscopic objects particularly relating to the bee. If any one is interested in the study of the microscope, and in dissecting the bee, he will do well to obtain these numbers of the journal. They tell how to dissect the trachea, the muscles, the nerve-chain, the sting, etc.

We want the names of several good reliable commission men in the several cities of the United States. We wish to give good and accurate honey quotations for the entire country, for the coming season. Will bee-keepers who know and have had dealings with reliable houses please send in their names? We have a good corps already, but we want it very largely increased.

ON account of our success in mailing queens to Australia and to the distant islands of the sea, *by mail*, we have orders booked for one select tested queen, two tested, and one tested honey queen, to parties in Australia; also one select tested to the West Indies, and two untested to Japan. We expect to send them out in a day or two; and as soon as we get reports from them we shall be glad to give our readers the result.

HONEY from fruit-blossoms is coming in at a pretty good rate to-day (13th). We never saw more new honey in the hives at this time of the year, although we have had some rather cool weather, with occasional frosts at night. It has also been pretty dry, although it looks as if we might have rain soon. The prospects (that is about all we have had for the last two years) are good so far for an old-fashioned honey season.

ALTHOUGH the subject of wintering should not now be discussed, yet, for fear we may not mention it again, we would say, that, this spring, when we discovered the bees were noisy, we could very quickly quiet them by swinging the door backward and forward rapidly, 25 or 30 times. This produced a marked circulation of air, as well as a marked difference in the behavior of the bees. We tried it a number of times, and in about an hour afterward we observed that the bees had become perfectly quiet. Yes, Dr. Miller, there is something in the ventilation of bee-cellars.

THE honey-jumble business is booming, so the bakers say. One firm uses up three barrels of inferior honey a week, and this despite the fact of the tariff reduction on sugar. There is a certain quality in honey not found in other sweets, that will keep cakes for an indefinite length of time. Jumbles seem to be about as good three or four years after being made as when first baked. In fact, they are one of the things that improve with age. Ask your baker or groceryman if he keeps them. This will induce him to order a trial lot, if he does not already have them, and so improve the outlet for dark honey.

ALTHOUGH we have quite a lot of reports encouraging in this issue, yet, from letters that have come in from various sources, it is evident that there have been pretty severe losses in certain sections of the country; and the fact that we have had a big rush of orders for bees and queens rather points in the same direction. A great many write that their bees have all died, and that they want just a nucleus to make a start, as they have a lot of empty hives, with good nice straight combs. Others are in a great hurry for their queens, as their bees are weak and queenless. We hope to have statistical reports in our next issue that will give a little more accurately the situation.

THE sixteenth thousand of Prof. Cook's "Bee-keepers' Guide" is just out. By scanning through the pages we do not discover that this edition has been revised. The price has been reduced to an even dollar. We have taken a little pains to look through the work, especially the scientific part of it. Cheshire's, although a magnificent work, is, we fear, not entirely accurate in some things; and Mr. Cowan's, while wonderfully free from errors, is a little too scientific and condensed for the average novice. Prof. Cook's book is written in a pleasing, popular style, and is, perhaps, as accurate as Mr. Cowan's work. The practical part, although not recently revised, is pretty well up to the times. We can furnish it at the author's price—\$1.00.

THERE is a sort of general impression, that bees in box hives outdoors will winter where those in modern hives will die. We somewhat question whether this is true. J. A. Stone, on page 391, last issue, says that more than half the bees in his section of country died through the winter, and they were all in box hives. It is true, that too much tinkering in "new-



fangled hives" kills bees; and it is also true, that, when the bees have prepared their winter nest in the fall, the same ought not to be disturbed—or, at least, the combs should not be shifted. The fact is, the modern double-walled hives will winter just as well outdoors as box hives, and a great deal better in most cases. Reports have shown it over and over again.

NEIGHBOR H. says he has observed, for several winters back, that his colonies with imported queens wintered the best. Last winter, although he suffered very severe losses among his home-bred stocks, he lost practically none of his colonies from imported queens. When it is remembered that the imported queens had been on a long journey across the ocean, these results are quite significant. The bees of imported stock are, as a general rule, leather-colored, and the queens are rather dark. As we have suffered very little loss during the years past, we have not had an opportunity of comparing the relative hardness of foreign and home-bred queens, although one of our imported stock died last winter, among the others.

We have just been purchasing some colonies on loose frames. An old Pennsylvania Dutchman who brought them up said he did not know why the bees bulged his combs so, and made them so crooked. We told him that they were spaced too far apart and too near together. Then he said he wished we would give him something next time that would space the frames just right. We showed him the Hoffman frames; and as his face lighted up he said, "Oh! dot's it! dot's it. Dey von't toomble all togedder ven ve gome to pring de pees oop t' M'tina, like dose racks vid tin corners on dit for me." Perhaps we should remark, that his combs, not having been fixed before moving, had jolted together; and when we pulled off the wire screens the bees were any thing but amiable. One queen was killed.

WE notice, by a recent issue of one of the papers, that no less than 10,000 patents have been taken out for car-couplings. This number far exceeds "all possible novel and useful combinations that could be devised in constructing such an article." This is a rank injustice to inventors, and the proper officials should see that it is stopped. There should not be more than one patent allowed on one idea, thing, or function, or combination of things, functions, and ideas. Patent-office reports are complete enough so that proper investigation should show whether the *identical* idea had been already covered by a patent. Apiculture is not exempt from the plurality of patents on one article, as we have already shown. We don't mean to be "cranky" on patents, but the facts above show that a good deal of money is wasted.

#### SUGAR SYRUP COMB HONEY.

An old farmer met us a few days ago, and put to us this question: "How do you feed bees sugar syrup to make comb honey?"

We stared at him a minute, and was about to take affront; but observing that he meant no insult, we said: "We do not do it, and, besides, it would be unprofitable business, to say nothing of the fraud that would be imposed on the consumer."

"But," said he, "sugar is away down, and syrup will cost only three or four cents a pound. There would be big money in feeding it to the bees, and getting 20 cts. a pound for it in comb honey."

We assured him that this practice would not pay when sugar was nine cents a pound; that much of the syrup would be lost in brood-rearing and the abnormal stimulation of the colony. We told him, further, that we very much doubted whether, at even the present very low price, it would be a very big bonanza. We hope none of our readers would think of doing such a thing, even if it would pay.

#### COLORADO AND ITS ALFALFA RESOURCES.

MR. J. L. PEABODY, of Denver, Col., sends us a newspaper clipping from which we take the following, written by H. Knight, of Littleton:

Only a few years ago the Colorado State Bee-keepers' Association started with but six members; now we have about one hundred. There are now in the State over 800 bee-keepers, and four years ago not one person was making a specialty of honey production. Now there are at least fifty that number their colonies by the hundred, and sell honey by the ton, so that, in 1889, about three hundred thousand pounds was produced, and in 1890 nearly half a million pounds of alfalfa honey was gathered by the busy bees.

We have known for a year back that Colorado was rapidly developing as a great honey State; and if what is stated in the above is true, we are not at all surprised. Still, it is a long way behind in annual honey production compared with that of a good many other States—California and York State, for instance.

#### A. G. HILL'S NEW BEE-SMOKER.

THIS new smoker has been tried in our apiary, and critically examined in every way here at the home of the Honey-bees. It embodies a bright idea, and may *eclipse* all other smokers. We do not see any thing said about a patent, or any thing of the sort; but we hereby protest against any one copying this smoker, or any feature of it. So far as we know, the invention belongs to Mr. Hill. And now let us, as bee-keepers and manufacturers of supplies, show our manliness by letting Mr. Hill have what seems justly to belong to him. We have made arrangements whereby we can furnish these smokers at his prices: viz., Hill smoker, 3-inch barrel, by express or freight, \$1.20; by mail, \$1.40. The bright thing about the whole invention is the cover and blast-tube formed out of one piece of metal, without joint or solder. The bottom of the fire-pot is also put in in the same way, without joint or solder, and so constructed as not to burn whatever it may come in contact with.

#### FOUNDATION $\frac{1}{4}$ INCH THICK.

We have just been introducing some radical improvements in making foundation-mills. We are sending a good many of them to Germany now, and some of the German bee-keepers want the foundation walls extra thick. One of these mills turns out foundation  $\frac{1}{4}$  inch thick. We sent a sample of it to Bro. Newman, and he makes this very kind notice of it:

We should imagine that the walls are sufficiently high to satisfy any one, even the most exacting. The workmanship on the mill must be first class, for the product is simply superb.

Perhaps we should add, that the foundation we are now making on our mills is very near perfection. Some of the very thinnest is so transparent that you can read coarse print through it when placed close to the wax; in fact, it is beautiful, even if we do say it. Another thing, we have so improved the mills that the wax *sometimes* runs through the mill without sticking to either roll. From all our late mills the foundation comes off much easier.

We have, up to May 1, 10,299 subscribers.

#### LOTTERIES, GIFT ENTERPRISES, ETC., PROHIBITED FROM PASSING THROUGH THE MAILS.

The following comes on a card, from the Postmaster-General:

#### CAUTION.

POSTOFFICE DEPARTMENT.  
Washington, D. C., January 27, 1891.

The attention of patrons of the postoffice is called to the fact that the law lately enacted prescribing penalties for using the United States Mails for the conveyance or transmittal of

#### LOTTERY

matter of any kind, applies as well to the person mailing money, money-orders, postal notes, or drafts to lottery companies or their agents, as it does to the lottery companies and their agents.

All persons are therefore warned *not to use the mails for such purposes*, and attention is called to the following extract from the law on the subject passed September 19, 1890:

Revised Statutes of the United States—Sec. 3894. No letter, postal-card, or circular concerning any lottery, so-called gift concert, or other similar enterprise offering prizes dependent on lot or chance, or concerning schemes devised for the purpose of obtaining money or property under false pretenses, and no list of the drawings at any lottery or similar scheme, and no lottery ticket or part thereof, and no check, draft, bill, money, postal note, or money order for the purchase of any ticket, or part thereof, or any share or chance in any such lottery or gift enterprise, shall be carried through the mail, or delivered at or through any post-office or branch thereof, or by any letter-carrier; nor shall any newspaper, circular, pamphlet, or publication of any kind containing an advertisement of any lottery or gift enterprise of any kind offering prizes dependent upon lot or chance, or containing any list of prizes awarded at the drawings of any such lottery or gift enterprise, whether said list is of any part or of all of the drawing, be carried in the mail or delivered by any postmaster or letter-carrier. Any person who shall knowingly deposit or cause to be deposited, or who shall knowingly send or cause to be sent, any thing to be conveyed or delivered by mail in violation of this section, or who shall knowingly cause to be delivered by mail any thing herein forbidden to be carried by mail, shall be deemed guilty of a misdemeanor, and on conviction, shall be punished by a fine of not more than five hundred dollars, or by imprisonment for not more than one year, or by both such fine and imprisonment for each offense.

BY ORDER OF THE POSTMASTER-GENERAL.

#### CONVENTION NOTICES.

The Cortland Union Bee-keepers' Association will hold their spring meeting at the residence of President J. H. Kennedy, No. 120 Groton Avenue, Cortland, N. Y., Tuesday, May 26, 1891. A special invitation is extended to the ladies. All interested are invited.

M. H. FAIRBANKS, Sec'y.

The annual picnic of the Oneida and Madison County Bee-keepers' Association will be held at the residence of Edward B. Beebe, at Oneida Castle, N. Y., on Thursday June 4th, 1891. These gatherings have become very popular, and largely attended, and it is expected that this one will eclipse any that has yet been held. Every one interested is cordially invited to attend.

COMMITTEE.

## SPECIAL NOTICES.

#### SPECIAL TERMS.

All dealers in bee-keepers' supplies, and those who buy to sell again, should bear in mind that we give special terms, made known on application, on all bee-keepers' supplies, and especially on goods of our manufacture.

#### LAWN-MOWERS.

This is the season for mowing the lawns and aparies, and we call your attention to our adv't on another page, presenting our two standbys in lawn-mowers. These are both good machines, and I think the price is lower than you can get from your local dealer. The Globe is, of course, the best machine; but for those who have only a small lot to mow, and don't want to put much money into a mower, the Young America presents a good opportunity.

#### SECTIONS.

Our new stock of lumber is now sufficiently seasoned for use, and we are turning out about the whitest and nicest sections we ever made. Some of the lumber would be better if a little drier, but

it is not so damp as to discolor; and the very drying weather we have had for a month back has worked wonders on it. Price of these white sections is as usual—\$3.50 for 1000; \$6.50 for 2000; \$9.00 for 3000, or \$14.00 for 5000. We have, besides, about 300,000 cream sections that are of very good quality, smooth, and well made, but a little off color, at 50c per 1000 less than above prices. We have these only in 1½, 1", and 7-to-the-foot widths, open top and bottom—no other kinds or sizes.

#### HONEY-KEGS.

Most of the commission men seem to go back on the 60-lb. square cans for extracted honey, claiming that kegs are preferable. Our experience with kegs has not been the best; but owing to the amount of testimony on the other side we shall have to conclude that we are prejudiced, and will give the kegs a fair trial again. We are prepared to furnish new full-hoop kegs, at the following prices, F. O. B. here or Townsend, Mass.:

4, 4½, or 5 gallons, 40c each; \$3.50 for 10.

10 gallon, 60c each; \$5.50 for 10.

20 gallon, 80c each; \$7.50 for 10.

#### OUR GOODS NEAR YOUR HOME.

We have established a number of depots of supplies, east, south, and west, from which many of our goods can be had at our prices.

F. A. Salisbury, West Genesee St., Syracuse, N. Y., keeps nearly a full line of supplies at our prices.

Jenkins & Parker, Wetumpka, Ala., also furnish our goods.

T. G. Newman & Son, 246 East Madison St., Chicago, Ill., handle our Dovetailed hives and some other supplies at our prices.

Jos. Nysewander, Des Moines, Ia., also carries a pretty full line.

Barteldes & Co., Denver, Col., and F. L. Posson & Co., Portland, Ore., also carry our goods.

Remember, you can not get *all* the goods we advertise, at these places; but the principal things needed by bee-keepers just now are on hand, and you may save time and freight by sending there instead of ordering of us.

#### ODD-SIZED SECTIONS IN STOCK.

We have the following lot of odd-sized sections in stock, which we will close out at the prices opposite. If you see any in the list that you can use, we shall be pleased to have your order. First come, first served. Unless you are prompt you had better name a second choice, to use in case the first choice is gone.

850 4 x4 x1½, open top, \$2.50.

1000 4½x4½x1½, " " 3.00.

1000 4½x5½x1½, " " 3.00.

1000 4½x4½x1½, " " 3.50.

400 4½x5½x1½, " " 1.50.

200 4½x5½x1½, " " .75.

500 4½x5 x1½, " " 1.50.

3500 4½x5½x1½, no openings; \$3 per M.; \$8 for lot.

1000 4½x4½x1½, cut for glass; \$3.00.

1000 5x5 scant, 2nd quality; \$2.00.

500 5x5x1½, closed top; \$1.75.

375 5½x4½x1½, open top; \$1.25.

300 5½x6x1½, open top; \$1.00.

500 6x4½x2, closed top; \$1.50.

1000 6½x5x1½, open top; \$3.50.

875 6x4½x2, open top; \$3.00.

300 5x6x1½, open top; \$1.25.

Remember, first dimension is the width, or measure of top and bottom; the second is the height, or side.

#### SHIPPING GOODS PROMPTLY.

The volume of business for this time of year is very good considering the discouraging reports of bees lost in wintering in many places; still we are not shipping nearly as many goods as we were doing this time last year. As our facilities are much better than last year, we are, as a matter of course, taking care of orders promptly. There are occasional exceptions, when something turns up to delay an order; but the rule now is, for goods to go within from one to four days after receiving the order. As a reserve stock we have on hand about 700 chaff hives, 350 one-story chaff hives, 350 portico hives, besides about 200 No. 1 E and 1200 No. 2 E Dovetailed hives, old style, mentioned in last GLEANINGS. These, instead of being packed with old-style brood-frames and slatted honey-boards, are, most of them, furnished with thick top-frames and no honey-boards, the same as our present make,



the only difference being that they are  $\frac{1}{4}$  inch narrower, and have no division-boards, followers, and wedges. We will sell these at the following special prices as long as they last; but be sure, in making your orders, to ask for the special old-style hives, and avoid mistakes and misunderstandings.

No. 1 complete, in flat, old style, \$5.00 for 5; \$9.50 for 10.

No. 1 E, same without sections, separators, and starters, \$4.00 for 5; \$7.50 for 10.

No. 2 complete, old style, \$7.00 for 5; \$13.50 for 10.

No. 2 E, no sections, fdn. starters, nor separators, \$5.00 for 5; \$9.50 for 10.

#### JAPANESE BUCKWHEAT.

While there has been a scarcity of all kinds of feed, and consequent high prices, a good deal of Japanese buckwheat has been used for feed, and we have had several reports of its value for this purpose. As it is a good yielder, and matures so soon, and likewise produces honey, it is a good thing to grow. We have a good supply of choice seed at these prices: 1 peck, 35c;  $\frac{1}{2}$  bu., 60c; 1 bu., \$1.00; 2 bu., \$1.75; 10 bu., \$8.00. If customers in the West will send in their orders at once we can ship to them from Goshen, Mo., thus saving freight. We can not ship from there after June 1, so you must be prompt. We can also ship from Rogersville, Mich.

#### REDUCTION IN THE PRICE OF ALUMINUM RULES.

The little rules mentioned on page 288 are now offered us so low that we have reduced the price to 20 cts. postpaid, instead of 25; or we will mail you six for \$1.00. While aluminium is hardly light enough to float on water, these rules, if laid carefully on the surface, before they are wet all over will actually float on water, and they are certainly quite a scientific curiosity. A strong light metal, and one perfectly free from tarnish, as a rule for measurements ought to be well worth the price to almost anybody.

### KIND WORDS FROM OUR CUSTOMERS.

We are all so well pleased with your Leader shears that I will order three more pairs. JOHN KARR.  
Little Rock, Ark., April 27.

Don't stop GLEANINGS; make it longer, wider, thicker, or shorter; but don't make it so it can't get to my postoffice. I expect to take it as long as I live.  
Mt. Erie, Ill., Apr. 15. J. J. McCoy.

#### A BEE-KEEPER IN EARNEST.

I started after the goods with my horse. She strained herself going out of the stable, and I am afraid she will die. I carried them home on my back, 7 miles. Our roads are not good here. We have the Ohio road-law, and can't get any thing done on them except what we do gratis. D. PARMENTIER.  
Norman, Wash.

#### MUCH PLEASED OVER THE DOOLITTLE SOLAR WAX-EXTRACTOR.

I am very much pleased with your solar extractor. It is a wonderful invention. It extracts wax and honey at the same time, and the honey is good too; and such nice pure yellow wax! Every apiary needs one. I took my bees out of the cellar Apr. 13. They came out strong and healthy. N. P. ASPINWALL.  
Harrison, Min., May 2.

#### A BIG TESTIMONIAL FOR THE BARNES SAW.

I received the Barnes combined machine in the best of order, and I must say it is the most complete machine of the kind I ever saw. I have worked with many buzz-saws, but none will equal this one. I see you have made many valuable changes in the A B C since I received my first edition some five years ago. A. S. BROWN.  
Londonderry, O., April 22.

Can you not send me 100 pamphlets on treating disease without medicine? A gentleman says he has not felt as well for ten years as he does now after using the treatment four days. Some of Dr. Hall's patients are feeling a little disappointed on account of having to pay \$4 for the same treatment, as they have told me. T. H. CHANCE.  
Fostoria, O., April 24.

[We send you 100, with pleasure.]

I have bought seeds for twenty years, and never received so much for so little money. Now, if they grow well I shall buy all my seeds of you hereafter.  
Mattawana, Pa., Apr. 13. MRS. SARAH E. YODER.

I subscribed for GLEANINGS through T. G. Newman & Son. I am well pleased with it. I have learned enough from one article (the one on rendering old combs with sulphuric acid, page 123, Feb. 15) to pay my subscription for ten years.

Elsinore, Cal., March 20.

LAFAYETTE YATES.

Money is pretty scarce with me, and I do not keep bees now; but GLEANINGS has been a constant visitor for the last 12 years, and I thought that Our Homes and Dr. Miller's article about the thoughts that come up in church were worth the price of it. It seemed to hit my case exactly. Such thoughts come up, although I try to keep them back on Sunday. I hope money will be more plentiful by the time this runs out. GEO. P. HOWARD.

Mexico, N. Y., Mar. 9.

#### MORE THAN SATISFIED.

The bees came last Friday, all in good shape. The memorandum bill came to hand yesterday. We desire to express our gratitude to you for sending a tested in place of untested queen. I ordered untested, because you recommend to beginners an untested queen, one frame of brood and one pound of bees. You have certainly given us more than specified. The bees are working finely, and do not seem homesick in the least. My daughter is much encouraged. H. A. BILLINGS.

Dayton, Ohio, May 12.

#### DOVETAILED HIVES, WITH HOFFMAN FRAMES, NEAR PERFECTION.

Late in December I sent you an order for ten Dovetailed hives in the flat, with Hoffman frames. They came early in January, in good condition, together with the other things which I sent for. I was away from home when they arrived or I would have reported before. Not even one little stick was missing—every thing going together like clockwork. I must say that I am about as near happy as can be over my purchase; and I think that, for a single-walled hive, your Dovetailed hive, with Hoffman frames, is now as near perfection as it can be. I have sent you several orders before, and never have had any cause for complaint. WM. H. LUM.

Stevenson, Conn.

#### THAT SEWING-MACHINE, AND HOW IT PLEASES.

Friend Root:—Sewing-machine No. 4, high arm, was received all right. It's a daisy, and does as good work as other machines sold around here at from forty to sixty dollars, and is just as good in every particular, so far as I can see. I will just say, it is all that is claimed for it, and more too. The machine was not for myself, but for a daughter who is married and keeping house. She and her husband have been talking of buying a machine for quite a while. When I saw your ad't in GLEANINGS, I at them to let me order one for them. They said there were so many frauds advertised in the papers, they were afraid to. I told them I would be responsible for all frauds that come through the GLEANINGS family. Now they are well pleased.

Morristown, Ind., March 7.

LEROY DYER.

## ITALIANS

9ftdb

Box 77.

Tested queen, \$1.50; Untested, \$1.00. Nuclei, brood, and bees by the lb. Send for price list.

MRS. A. M. KNEELAND,  
Mulberry Grove, Bond Co., Ill.

In responding to this advertisement mention GLEANINGS.

## QUEENS, QUEENS.

Price List Free.

H. ALLEY, Wenham, Essex Co., Mass.

Please mention this paper.

6ftd

MY 23D ANNUAL CATALOGUE OF ITALIAN, CYPRIAN, AND HOLY-LAND BEES, QUEENS, NUCLEI, COLONIES, and SUPPLIES; also EGGS FOR HATCHING, can be had by sending me your address. H. H. BROWN, Light St., Col. Co., Pa.

Please mention this paper.

**LADIES SAVE YOUR MONEY.**

**FINE SHOES AT \$2.17 A PAIR**  
SENT POSTPAID.

Genuine Kid—Soft Soles. Elegant Style. Perfect Fitting—a shoe that has style, and will wear as long as shoes sold at \$2.50 and \$3.00. Try them. You will be pleased, for they are **GOOD SHOES.**

**Widths, C, D, E, EE. Sizes, 1 to 7.**

Do you want Broad or Narrow toe?

Send P. O. order, registered letter, or postal note.

**C. L. GRIESINGER, MEDINA, O.**

Reference—Gleanings. 8-9-10d.

Please mention this paper.

**♠ Queens . From . Texas. ♠**

Kind friends, I have untested Italian queens from now till September, at 75c each; \$4.00 for 6, or \$7.25 per doz. I have shipped hundreds this spring, and all by return mail so far. I have my breeding yards kept out on the lone prairie at safe distance. Give me your orders and see how promptly I can fill them. 100 nuclei running. 10tfdb

**MRS. JENNIE ATCHLEY,**  
**Box V., Farmersville, Tex.**

In writing to advertisers please mention this paper. 3-8db

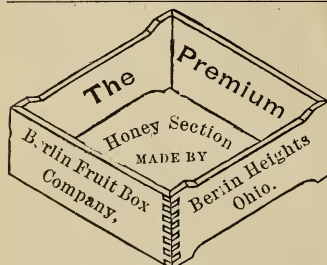
**F**OUNDATION & SECTIONS are my specialties. No. 1 V-groove Sections at \$3.00 per 1000. Special Prices to dealers. Send for free price list of every thing needed in the apiary. **M. H. HUNT,**  
10tfdb **Bell Branch, Mich.**

In responding to this advertisement mention GLEANINGS.

**PURE :: ITALIAN :: QUEENS.**

**TESTED, \$1.50. IMPORTED**  
**UNTESTED, \$1.00. MOTHER.**

**MISSSES S. & M. BARNES, PIKETON, OHIO.**  
Please mention GLEANINGS. 6-7-8-9-10-12d

**ONE-PIECE SECTIONS,**

both No. 1 & 2; WOOD SEPARATORS and other bee-supplies. Also BERRY-CRATES, BASKETS and BOXES, made up or in flat. Send for catalogue. Address as in cut.

Please mention this paper.

5-10db

**IMPORTED ITALIAN QUEENS.**

**W. C. FRAZIER, ATLANTIC, IOWA.**

7-17db Please mention this paper.

**STOP! THINK! ACT!**

Griffith's Italian queens will give you strong colonies, plenty of honey, and nice bees. 7-12db

Untested queens in May, \$1.00.

Tested " in June, July, and Aug., 75c.

" " in May, \$1.25.

" " in June, July, Aug., & Sept., \$1.00.

All queens reared from best imported and choice home mothers. Safe arrival guaranteed. Address all orders to **B. C. GRIFFITH,** Griffith, N. C. Postoffice order on Charlotte, or reg. let. to Griffith. Please mention this paper.

**MUSICAL INSTRUMENTS**  
**MURRAY & HEISS**  
CLEVELAND OHIO.  
SEND FOR CATALOGUE.

In responding to this advertisement mention GLEANINGS.

**Bee-Keepers' Supplies.**

Hives, Honey-Cases, Sections, and Frames. We are the only concern in Southern California who make a

**SPECIALTY OF BEE-KEEPERS' MATERIAL**

Agents for the white basswood 1-lb. sections. Send for catalogue and price list.

1-12db

**OCEANSIDE MILL CO.,**

**Oceanside, Cal.**

In responding to this advertisement mention GLEANINGS.

**SAMUEL JONES,**

Manufacturer of Bee-keepers' Supplies. Free catalogue. **Highland Park College, Des Moines, Ia.**

In responding to this advertisement mention GLEANINGS.

**Syracuse, New York,**

IS A DEPOT FOR THE EAST FOR ALL OF A. I.

ROOT'S APIARIAN SUPPLIES.

**FOUNDATION is Our Own Make.**

Don't buy foundation of us, for it would please you.

**F. A. SALISBURY.**

Our Foundation is kept for sale by

**HENRY ALLEY, Wenham, Mass.**

In writing to advertisers please mention this paper. 4tfdb

**NOW, FRIENDS, LOOK HERE!**

I sell the Nonpareil Bee-Hive, White Poplar Sections, Italian Bees and Queens. Price List free. Write for one. 8tfdb

**A. A. BYARD, West Chesterfield, N. H.**

In responding to this advertisement mention GLEANINGS.

**J. W. Taylor's Fine Italian \* \* \***

**\* \* \* and Albino Queens for Sale.**

Cheap tested Italian, \$1.50 each. Tested Albinos, \$1.50 each. Tested golden Italian, \$2.00 each. Untested queens, 75 cts. each; \$8.00 per doz. I guarantee safe arrival by mail. 9tfdb

**J. W. TAYLOR, Ozan, Ark.**

**For Sale at Wholesale Prices.**

One Parlor Organ, \$45.00; retail, \$85.00.

One Wagon and one Horse, \$45.00; retail, \$90.00.

One Barnes Saw, \$25.00; retail, \$35.00.

Can sell only ONE of each at this price. 9-10d.

**L. L. BERNHOWER, Reading, Pa.**

Please mention this paper.

**FOR SALE.**

75 colonies of Italian bees in Langstroth 10-frame, and A. I. Root's 8-frame Dovetailed hives, at \$5.00 per colony. A liberal discount on more than one colony.

**JOHN GRANT, Batavia, Clermont Co., O.**

Mention this paper.

9-10-11d

**FOR SALE.**

100 L. size combs, on standard wired frames, made from foundation free from disease, at 10c each. Also a Barnes combined saw, good as new. 9-10d

**H. W. AVIS, Matteawan, Dutchess Co., N. Y.**

**A Four-Color Label for Only 75 Cts. Per Thousand.**

Just think of it! we can furnish you a very neat four-color label, with your name and address, with the choice of having either "comb" or "extracted" before the word "honey," for only 75 cts. per thousand; 50 cts. per 500, or 30 cts. for 250, postpaid. The size of the label is 2½ x 1 inch—just right to go round the neck of a bottle, to put on a section, or to adorn the front of a honey-tumbler. Send for our special label catalogue for samples of this and many other pretty designs in label work.

**A. I. ROOT, Medina, O.**



## Advanced Bee Culture;

ITS METHODS AND MANAGEMENT. I am now engaged in writing and printing a book that is to bear this

title. It is to take the place of my other book, *The Production of Comb Honey*, which will not be re-published. Although the new book will contain at least five or six times as much matter as *The Production of Comb Honey*, yet the price will be only 50 cts. The book is already partly printed, and will probably be out some time in April or May. If any of the friends would like to "help me along" in meeting the expenses of getting out the book, they can do so by sending their orders in advance. Such orders will be most thankfully received, and filled the *very day* the book is out. I will send the REVIEW one year and the book for \$1.25. The REVIEW will be sent on receipt of order (I have plenty of back numbers to send it from the beginning of the year), and the book as soon as it is out. Stamps taken, either U. S. or Canadian. 10tfdb

W. Z. HUTCHINSON, Flint, Mich.

☞ In responding to this advertisement mention GLEANINGS.

## Leahy M'fg Co.,

—UNDOUBTEDLY THE—

### LARGEST PLANT IN THE WEST,

Built exclusively for the manufacture of Apiarian Supplies. One and One-Half Acres Floor Space. We sell as Cheap as the Cheapest, and our goods are as Good as the Best. Parties will do well to write us for estimates on large orders. We will send you our catalogue for your name on a postal card. Address LEAHY MFG. CO., 7tfdb Higginsville, Mo.

Please mention this paper.

## NEBRASKA

3-frame nucleus (without queen) \$2.00.  
3-frame nucleus (with tested queen) \$3.50.  
3-frame nucleus (with queen from our own apiary) each, \$2.56. Pure Italian queens, each, \$1.50. Descriptive price list free. J. M. YOUNG, Box 874. 7tfdb Plattsmouth, Neb.  
Please mention this paper.

## ITALIAN QUEENS FOR SALE.

May or June, tested, \$1.50; untested, \$1.00. July and August, tested, \$1.00; untested, 75 cts. Bees at \$1.00 per lb. Make money order payable at Waynesburg, Greene Co., Pa. MRS. A. A. SIMPSON, 9-16db Swarts, Pa.  
Please mention this paper.

**FOR SALE.**—Eggs of Golden Wyandottes, \$2.00 per 13. Silvers, \$1.00 per 13. Japanese buckwheat, 90c per bushel. Sacks free. 7-10-db P. F. RHODES, New Castle, Ind.

Established 1878.

## SMITH & SMITH,

Wholesale and Retail Manufacturers of

## BEE-KEEPERS' SUPPLIES.

KENTON, OHIO.

Price List Free. 4tfdb Mention Gleanings.



3tfdb

### CHEAP ENOUGH.

Sections, \$3.00 per 1,000. Foundation, 45 cts. per pound; Chaff Hives, \$1.25 each; Simplicity hives, 90 cts. each; Dovetailed hives, 80 cts. each, and every thing needed in the apiary, cheap. Send for illustrated price list for 1891, free.

"How I Produce Comb Honey," by mail, 5 cts. Third edition just out. Address

GEO. E. HILTON, Fremont, Mich.

Please mention this paper.

\$5.00 IN MAY, AND \$4.50 IN JUNE,

—WILL BUY—

## A Strong Full Colony of Pure Italian Bees

in Root's new Dovetailed or the old Simplicity hive, as you prefer. Each to contain a fine tested queen and plenty of bees and brood. Everything first-class. Pure Japanese Buckwheat, per bu., \$1; ½ bu., 60c; ¼ bu., 35c, bag included. Scotch Collie Pups, \$4 each.

N. A. KNAPP, Rochester, Lorain Co., O. 6tfdb

Please mention this paper.

## SECTIONS.

\$2.50 to \$3.50 per M. Bee-Hives and Fixtures cheap. NOVELTY CO., 6tfdb Rock Falls, Illinois.

**EGGS!** Brown Leghorn; White Leghorn, \$1.25. Black Minorca, Plymouth Rock, Pekin Duck, \$1.50. Light Brahma, Langshan, Game, \$2 per 13 eggs. Strictly pure-bred. Ship safely anywhere. Illustrated circular free. 1tfdb GEER BROS., St. Marys, Mo.

☞ In responding to this advertisement mention GLEANINGS.

## FOR SALE!

50 colonies of Italian and hybrid bees, by the pound or colony. For particulars address

C. A. KEELER, Carlinville, Ill. 8-9-10d Please mention GLEANINGS

## THE RECORD BROKEN,

And the race is won by the Albinos, which outstripped even the Italians in gentleness, beauty, honey-gathering, and the prolificness of queens. This race of bees was brought about by the reproduction of an Italian sport, and greatest care has been taken to get them pure, and the result is a race of bees that ranks first in the bee world. Try one of these queens. Descriptive catalogue free. 8tfdb

A. L. KILDOW, SHEFFIELD, ILL.

☞ In responding to this advertisement mention GLEANINGS.

## NEW FACTORY.

No. 1 Sections, \$3.50; No. 2, \$2.75. Fine Comb Foundation a specialty.

M. S. ROOP, 520 East Broadway, Council Bluffs, Ia. 6-17db

☞ In responding to this advertisement mention GLEANINGS.

## BEESWAX

**FOR SALE.**—Crude and refined. We have constantly in stock large quantities of Beeswax, and supply the prominent manufacturers of comb foundation throughout the country. We guarantee every pound of Beeswax purchased from us absolutely pure. Write for our prices, stating quantity wanted.

ECKERMANN & WILL,

Bleachers, Refiners, and Importers of Beeswax,

5-16db

Syracuse, N. Y.

☞ In responding to this advertisement mention GLEANINGS.





## ~~~~~ALLEY'S SELF-HIVER~~~~~

FIRST REPORT FOR 1891.

On Saturday, March 28, 1891, I placed one of Mr. Alley's self-hivers at the entrance of a hive from which I knew the bees would swarm in a few days; near this hive was one prepared to receive the new swarm when it issued. On Sunday afternoon about 4 o'clock, in walking through the apiary, I saw the bees at work in the new hive. They had swarmed and hived themselves and were working nicely, without any assistance whatever on my part, except to make the necessary preparation for them. This self-hiver will certainly be a wonderful help to bee-keepers. Mr. Alley, the inventor, should receive not only the heartfelt thanks of all who are interested in bee-keeping, but something more substantial in the way of our liberal patronage.

By the use of the drone-trap and queen-cage combined, which was invented by the same gentleman, I secured 48 swarms out of 49, in 1888, without so much as having to cut a single twig in living them. 10d

MRS. SALLIE E. SHERMAN, Salado, Bell County, Texas.

Full description Self-Hiver mailed free. Sample Hiver by mail, \$1.00.

H. ALLEY, WENHAM, MASS.

### NEW SYSTEM FOR COMB HONEY

and many rare, new methods and devices.

See my new catalogue of BEES, HONEY, and SUPPLIES. Just out.

Oliver Foster, Mt. Vernon, Linn Co., Ia.

Please mention this paper.

### ITALIAN QUEENS.

GUARANTEED TO PLEASE.

Tested, May, \$2.50; June, \$2; untested, May and June, \$1.00; July, 75c. I have also a few mismatched queens that are nearly pure, very fine, and good workers. Choice, 50c; 5 for \$2.00. Send for my catalogue. 10d

A. A. WEAVER, WARRENSBURG, MO.

In response to this advertisement mention GLEANINGS.

## The Brightest and Yellowest

Bees and Queens, and the Reddest Drones in the world, that are now being offered by others, are, in most cases if not all, bred from queens that were

### Procured of Me,

Being from "headquarters" of the 100 queens of this strain sent to G. M. Doolittle. He writes me in 1890,

"Not one Impurely Mated."

Prices: Untested in May, \$1.25; June and after, \$1. Tested, in May, \$2.50; June and after, \$2.00. Select Tested, \$3.00. Special breeding queens, each, \$5.00.

SAFE ARRIVAL AND SATISFACTION GUARANTEED.

L. L. HEARN,

FRENCHVILLE, MERCER CO., W. VA.

Please mention this paper. 7d

### OTTUMWA BEE-HIVE FACTORY.

We have a nice supply of hives in the flat, which we will sell as follows: The A. I. Root Simplicity, for extractor, \$1.50; 5 for \$7.00. Simp. for comb honey, with 2 T supers, sections, foundation starters, wood separators, and honey-board complete, in flat, each, \$2.10; 5 for \$10.00. Portico hive with Simplicity upper story, in flat, for the same price.

The improved Langstroth-Simplicity, in flat, eight-frame, 1½ story, each, 90 cts.; 5 for \$4.00; ten-frame, 1½-story, each, \$1.00; 5 for \$4.50; eight-frame, 2-story, each, \$1.20; 5 for \$4.75; ten-frame, 2-story, each, \$1.30; 5 for \$5.25. Dovetailed hives, the same price as the eight-frame hives above.

#### SHIPPING-CRATES.

12-lb. crate, 11 cts. each; 16-lb., 13 cts.; 24-lb., 14 cts.; 48-lb., 16 cts. each.

Comb foundation.—Heavy brood, 48c; thin, 58c; extra thin, 68c.

Pound sections, snow-white, at \$3.50 per 1000. No. 1, cream, \$3.00. Bee-veils, cotton tulle, with silk tulle face, 75 cts. each. Bingham smokers at manufacturer's prices. Write for prices to 5tdfb

GREGORY BROS. & SON, OTTUMWA, IA. SOUTH SIDE.

In response to this advertisement mention GLEANINGS.

### Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they wish to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough in these queens to pay for buying them up and keeping them in stock; and yet it is oftentimes quite an accommodation to those who can not afford higher-priced ones.

A few mismatched and hybrid queens for sale, reared from select honey stock. 40 cts. each. Address L. C. CALVERT, Poplar Flat, Ky.

Hybrid queens for sale, from May 15 to Dec. 1, '91. 50c each, 3 for \$1.25. ENOCH ANDERSON, Comanche, Comanche Co., Tex.

I have several mismatched Italian queens which I will send on receipt of 35 cts. each, or 3 for \$1.00. All industrious. Send to W. A. BARNHILL, Silver, Coke Co., Tex.

Five mismatched Italian queens producing  $\frac{2}{3}$  three-banded bees; rest ranging down to one-banded; if taken now, at 50 cts. each, or the lot for \$2.00. Money returned, less postage, in case of being sold out, or held for further instructions. State which you wish, and send at once. A bargain. Queens are not up to standard in markings. Address

JACOB T. TIMPE, Grand Ledge, Mich.

### Wire Cloth.

For door and window screens, tacking over hives and nuclei for shipping, making bee and queen cages, and a variety of purposes. We have the following list of green and black wire cloth which is not exactly first class, but is practically as good for the purposes mentioned, and at prices MUCH BELOW the ordinary price. You can no doubt select from this list a piece to suit your needs. Price in full pieces, 1½ cts. per square foot. When we have to cut it, 2 cts. In case the piece you order may have been taken by some one else before your order comes, please say whether we shall send the nearest in size, or cut one the size ordered at 2 cts. per ft., or give a second or third choice.

No. of Rolls, and Color.	Width, Ins.	Length, Ft.	Sq. Feet.	Price of a Full Roll.	Pieces less than 100 ft. long. These figures are the number of square feet in each piece. Multiply by 1½ cents for the price of piece.
10 green	8	100	67	\$1.17	65, 64, 63, 63, 63, 62, 33
25 green	12	100	100	1.75	
5 green	24	100	200	3.50	140, 8, green; 200 black.
35 green	25	100	217	3.50	This is below reg. pr. of 1½ c.
14 green	28	100	233	4.08	224, 224, green.
15 green	30	100	250	4.37	
5 green	32	100	267	4.67	
11 green	36	100	300	5.25	
6 black	38	100	317	5.54	269, black; price \$4.70
5 green	38	100	317	5.54	
3 black	40	100	333	5.83	
7 black	42	100	350	6.12	
15 green	30	100	250	4.37	

A. I. ROOT, Medina, Ohio.

## Bee-Hives, Sections, Etc.

**BEST GOODS at LOWEST PRICES.**

We make 15,000 sections per hour. Can fill orders promptly. Write for free, illustrated catalogue.

**G. B. LEWIS CO., WATERTOWN, WIS.**

In responding to this advertisement mention GLEANINGS.

## DO YOU KNOW

that you can buy a good hive for 55 cts., 100 brood-frames for \$1.00? Nice foundation cheap. Smokers and feeders, and every thing you need. You can save money by sending an order. Special terms to dealers. 8-9-10d

**W. H. BRIGHT, MAZEPPA, MINN.**

In responding to this advertisement mention GLEANINGS.

## On Their Own Merits.

I am making a specialty of breeding **Golden and Albino Italian Queens**. My five-banded bees are equal to any as honey-gatherers, and they are the most beautiful and gentlest bees known. Warranted queens, May, \$1.25; six for \$6; after June 1, \$1; six for \$5. Satisfaction guaranteed. I have a few 3-banded tested queens at \$1 each.

**CHARLES D. DUVALL,**  
Spencerville, Montg'y Co., Md.

9tfdb

Please mention this paper.

## CONTROL YOUR SWARMS.

N. D. West's coil-wire queen-cell protectors will do it, and you can REQUEEN your apiary during the swarming season. Pronounced the BEST by such men as

**CAPT. J. E. HETHERINGTON, CHERRY VALLEY, N. Y.,**  
**P. H. ELWOOD, STARKVILLE, N. Y.,**

and others. Cell-protectors, \$3.00 per 100, or 12 for 60c, by mail. Cages, \$5.00 per 100, or 12 for \$1.00, by mail. Samples of both, with circular explaining, 25 cts. See cut and description on page 321. Patent applied for. Address 8tfdb

**N. D. WEST, MIDDLEBURGH, SCHOHARIE CO., N. Y.**

In responding to this advertisement mention GLEANINGS.

## Queens! Queens! Queens!

If you want bees that will beat any thing you ever saw in every respect, try our strain of Italians. Warranted queens, each, \$1.00; six, \$4.50. 8-9-10d

**ORDER NOW, PAY UPON ARRIVAL.**

**JAS. & F. B. YOCKEY,**  
NORTH WASHINGTON, WESTM'D CO., PA.

In responding to this advertisement mention GLEANINGS.

## \*THE CANADIAN\*

**Bee Journal**

Edited by D. A. Jones.

75c. Per Year.

**Poultry Journal**

Edited by W. C. G. Peter.

75c. Per Year.

These are published separately, alternate weeks, and are edited by live practical men, and contributed to by the best writers. Both Journals are interesting, and are alike valuable to the expert and amateur. Sample copies free. Both Journals one year to one address \$1. Until June 1st we will send either Journal on trial trip for 6 months for 25 cts.

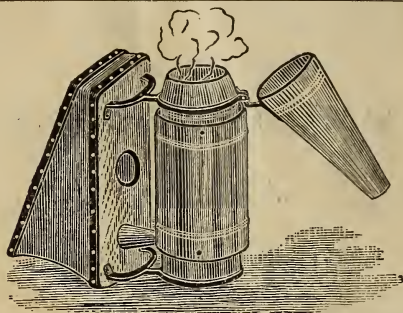
**The D. A. Jones Co., Ltd., Beeton, Ont.**

Please mention GLEANINGS.

## Queens Ready to Mail.

Safe arrival guaranteed. Untested (Italians) \$1; 3 for \$2.75, and \$9.00 per doz. Tested queens all sold, but will have more by June 1st (reared this season) at \$2.00. Order early, but do not say for us to send queens before you actually wish them sent. Make money orders payable at Clifton. Send for price list, etc., to  
**COLWICK & COLWICK,**  
Norse, Bosque Co., Tex.  
4tfdb

Please mention this paper.



Smokers, Foundation, and all kinds of bee-keepers' supplies furnished at lowest cash price. If you want the best Smoker in the market get one of the Quinby old reliable—made the strongest; and although the first cost is more than that of any other made, the Jumbo is the boss of all. It has been used constantly in yards for 8 years, and still it goes. Send and get price list of Smokers, Foundation, Sections, and every thing used in the apiary. Dealers should send for dealer's list on smokers.  
4-14db **W. E. CLARK, ORISKANY, N. Y.**

In responding to this advertisement mention GLEANINGS.

## IT WILL PAY YOU

To Send for my Illustrated Catalogue of

## APIARIAN SUPPLIES

Before placing your orders. I have a lot of very nice No. 2 sections at \$2.00 per 1000.

**J. C. SAYLES, HARTFORD, WISCONSIN.**

8tfdb

Please mention this paper.

## SAVE FREIGHT

By buying your supplies near home. Catalogue for your name on a postal card. Address

4 10db **J. W. ROUSE & CO., Mexico, Mo.**

Please mention this paper.

1891. **NEW BEE-HIVE FACTORY.** 1891.

Root's Dovetailed Hive a specialty. Price List free. Save your freight, and order early of

1tfdb **GEO. W. COOK,**  
**Spring Hill, Johnson Co., Kan.**

Please mention this paper.

## SECTIONS! SECTIONS! SECTIONS!

On and after Feb. 1, 1890, we will sell our No. 1 V-groove sections, in lots of 500, as follows: Less than 2000, \$3.50 per 1000; 2000 to 5000, \$3.00 per 1000. Write for special prices on larger quantities. No. 2 sections at \$2.00 per 1000. Send for price list on hives, foundation, cases, etc.

6-1ftdb **J. STAUFFER & SONS,**  
Successors to B. J. Miller & Co.,  
Nappanee, Ind.

In writing advertisers please mention this paper.

## Printing,

Note Heads, Bill Heads, Envelopes,  
Business Cards 250 for \$1.00

Post Paid. Good honest work and paper, 50 Ladies Cards in Steel Plate Script 25 c. No Samples, 12 Years in Business, Send Copy and dollar to  
**BURTON L. SAGE, New Haven, Conn.**  
Please mention this paper. 4db



# GLEANINGS IN BEE CULTURE.

## Books for Bee-Keepers and others.

Any of these books on which postage is not given will be forwarded by mail, postpaid, on receipt of price.

In buying books, as every thing else, we are liable to disappointment if we make a purchase without seeing the article. Admitting that the bookseller could read all the books he offers, as he has them for sale, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. I very much desire that those who favor me with their patronage shall not be disappointed, and therefore I am going to try to prevent it by mentioning all the faults, so far as I can, that the purchaser may know what he is getting. In the following list, books that I approve I have marked with a \*; those I especially approve, \*\*; those that are not up to times, †; books that contain but little matter for the price, large type, and much space between the lines, ‡; foreign, §. The bee books are all good.

### BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You will notice, that you can judge of the size of the books very well by the amount required for postage on each.

- 1 Bible, good print, neatly bound..... 25
  - 1 Bunyan's Pilgrim's Progress\*\*..... 35
  - 20 Illustrated Pilgrim's Progress\*\*..... 75
  - This is a large book of 425 pages and 175 illustrations, and would usually be called a \$2.00 book. A splendid book to present to children. Sold gilt edge for 25¢ more.
  - 6 First Steps for Little Feet. By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can hardly be found a more attractive book. Beautifully bound, and fully illustrated. Price 50 c. Two copies will be sold for 75 cents. Postage six cents each.
  - 5 Harmony of the Gospels..... 35
  - 3 John Ploughman's Talks and Pictures, by Rev. C. H. Spurgeon\*..... 10
  - 1 Gospel Hymns, consolidated Nos. 1, 2, 3, and 4, words only, cloth, 10 c; paper..... 05
  - 2 Same, board covers..... 20
  - 5 Same, words and music, small type, board covers..... 45
  - 10 Same, words and music, board covers..... 75
  - 3 New Testament in pretty flexible covers..... 15
  - 5 New Testament, new version, paper covers..... 10
  - 5 Robinson Crusoe, paper cover..... 20
  - 4 Stepping Heavenward\*\*..... 18
  - 15 Story of the Bible\*\*..... 1 00
  - A large book of 700 pages, and 274 illustrations. Will be read by almost every child.
  - 6 The Christian's Secret of a Happy Life\*\*..... 25
  - 8 Same in cloth binding..... 50
  - 1 "The Life of Trust," by Geo. Muller\*\*..... 1 25
  - 1 Ten Nights in a Bar-Room, T. S. Arthur\*..... 03
  - 5 Tobacco Manual\*\*..... 45
- This is a nice book that will be sure to be read, if left around where the boys get hold of it, and any boy that reads it will be pretty safe from the tobacco habit.

### BOOKS ESPECIALLY FOR BEE-KEEPERS.

- |  |                         |
|--|-------------------------|
| Postage  | (Price without postage) |
| 15 A B C of Bee Culture. Cloth.....  | 1 10                    |
| 5 A Year Among the Bees, by C. C. Miller.....  | 45                      |
| 14 Bees and Bee-keeping, by Frank Cheshire, England. Vol. I &.....   | 2 36                    |
| 21 Same, Vol. II, \$.....  | 7 29                    |
| or, \$5.25 for the two, postpaid.  |                         |
| Bees and Honey, by T. G. Newman.....   | 1 00                    |
| 15 Cook's New Manual. Cloth.....   | 1 35                    |
| 5 Doolittle on Queen-Rearing.....  | 95                      |
| 2 Dzierzon Theory.....   | 10                      |
| 1 Foul Brood; Its Management and Cure; D. A. Jones.....  | 09                      |
| 1 Honey as Food and Medicine.....  | 5                       |
| 10 Langstroth on the Hive and Honey-Bee.....   | 1 40                    |
| 15 Langstroth Revised by Ch. Dadant & Son.....   | 1 85                    |
| 10 Quinby's New Bee-Keeping.....   | 1 40                    |
| 5 Thirty Years Among the Bees, by H. Alley.....  | 45                      |
| 4 Success in Bee Culture, by James Heddon Handling Bees, by Langstroth. Revised by Dadant.....   | 8                       |
| Bee-keeping for Profit, by Dr. G. L. Tinker The Apiary; or, Bees, Bee-Hives, and Bee Culture, by Geo. Neighbour & Sons, England. British Bee-keeper's Guide-Book, by Thos. Wm. Cowan, Esq., England..... | 75                      |
| 3 Merrybanks and His Neighbor, by A. I. Root.....  | 25                      |

### MISCELLANEOUS HAND-BOOKS

- 5 A B C of Carp Culture..... 35
- 3 A B C of Potato Culture, Terry\*\*..... 35
- This is T. B. Terry's first and most masterly work. The book has had an enormous sale, and has been reprinted in foreign languages. When we are thoroughly conversant with friend Terry's system of raising potatoes, we shall be ready to handle almost any farm crop successfully. It has 48 pages and 22 illustrations.
- 5 A B C of Strawberry Culture, by T. B. Terry and A. I. Root, 144 pages; 32 illustrations..... 35
- An Egg-Firm, Stoddard\*\*..... 45
- 5 Amateur Photographer's Hand-book\*\*..... 70
- Barn Plans and Out-Buildings\*..... 1 50
- Cranberry Culture, White's..... 1 25

- Canary Birds, Paper, 50 c; cloth\*..... 75
- Draughting for Profit and Health, Warrington..... 1 50
- 5 Eclectic Manual of Phonography; Pitman's System; cloth..... 50
- 6 Fuller's Practical Forestry\*..... 1 40
- 10 Fuller's Grape Culturist\*\*..... 1 40
- 10 Farming for Boys\*..... 1 15
- This is one of Joseph Harris' happiest productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.
- 7 Farm, Gardening, and Seed-Growing\*\*..... 90
- This is by Francis Brill, the veteran seed-grower, and is the only book on gardening that I am aware of that tells how market-gardeners and seed-growers raise and harvest their own seeds. It has 166 pages.
- 10 Gardening for Pleasure, Henderson\*..... 1 40
- While "Gardening for Profit" is written with a view of making gardening PAY, it touches a good deal on the pleasure part; and "Gardening for Pleasure" takes up this matter of beautifying your homes and improving your grounds without the special point in view of making money out of it. I think most of you will need this if you get "Gardening for Profit." This work has 246 pages and 134 illustrations.
- 12 Gardening for Profit, new edition\*\*..... 1 85
- This is a late revision of Peter Henderson's celebrated work. Nothing that has ever before been put in print has done so much toward making market-gardening a science and a fascinating industry. Peter Henderson stands at the head, without question, although we have many other books on these rural employments. If you can get but one book, let it be the above. It has 376 pages and 138 cuts.
- Gardening for Young and Old, Harris\*..... 1 25
- This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes thorough cultivation of the soil in preparing your ground, and this matter of adapting it to young people as well as old is brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of this book. It has 187 pages and 46 engravings.
- 10 Garden and Farm Topics, Henderson\*\*..... 75
- Gray's School and Field Book of Botany..... 1 80
- 5 Gregory on Cabbages; paper\*..... 25
- 5 Gregory on Squashes; paper\*..... 25
- 5 Gregory on Onions; paper\*..... 25
- These above three books, by our friend Gregory, are all valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.
- 10 Household Conveniences..... 1 40
- 2 How to Propagate and Grow Fruit, Green\*..... 25
- 2 Injurious Insects, Cook..... 25
- 10 Irrigation for the Farm, Garden, and Orchard, Stewart\*..... 1 40
- This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, brooks, or windmills, to take the place of rain, during our great droughts, is the great problem before us at the present day. The book has 274 pages and 142 cuts.
- 3 Maple Sugar and the Sugar-bush\*\*..... 35
- By Prof. A. J. Cook. This was written in the spring of 1887 at my request. As the author has, perhaps, one of the finest sugar-camps in the United States, as well as being an enthusiastic lover of all farm industries, he is better fitted, perhaps, to handle the subject than any other man. The book is written in Prof. Cook's happy style, combining wholesome moral lessons with the latest and best method of managing to get the finest syrup and maple sugar, with the least possible expenditure of cash and labor. Everybody who makes sugar or molasses wants the sugar-book. It has 42 pages and 35 cuts.
- 1 Poultry for Pleasure and Profit\*\*..... 10
- 11 Practical Floriculture, Henderson\*..... 1 35
- 1 Peach Culture, Fulton's..... 1 50
- 10 Profits in Poultry\*..... 90
- 2 Silk and Silkworm..... 10
- 10 Small-Fruit Culturist, Fuller..... 1 40
- 10 Success in Market-Gardening\*..... 90
- This is a new book by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Boston, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a small and steam-engine, whereas the drought threatens to injure the crop. The book has 206 pages, and is nicely illustrated with 110 engravings.
- 1 Ten Acres Enough..... 1 00
- The Silo and Ensilage, by Prof. Cook, new edition, fully illustrated..... 25
- Talks on Manures\*..... 1 75
- This book, by Joseph Harris is, perhaps, the most comprehensive one we have on the subject, and the whole matter is considered by a capable writer. It contains 366 pages.
- 2 The Carpenter's Steel Square and its Uses..... 15
- 10 The New Agriculture; or, the Waters Led Captive..... 75
- 2 Treatise on the Horse and his Diseases..... 10
- 3 Winter Care of Horses and Cattle..... 40
- This is friend Terry's second book in regard to farm matters; but it is so intimately connected with his potato-book that it reads almost like a sequel to it. If you have only a horse or a cow, I think it will pay you to invest in the book. It has 44 pages and 4 cuts.
- 8 What to Do and How to be Happy While Doing It, by A. I. Root..... 50
- 3 Wood's Common Objects of the Microscope\*\*..... 47

A. I. ROOT, Medina, O.

# —OUR NEW— OUTSIDE WINTER - CASE FOR DOVETAILED HIVES

Is now ready. It is **LIGHT, STRONGLY MADE**, with **SOLID CORNERS**, gable roof, and is **PERFECTION**. It is especially designed for using on the regular **Dovetailed Hive**, and we guarantee that bees will winter safer with it than any other method.—Besides it is **VERY CHEAP**, and no trouble to use.

We have also just constructed a **THIN-WALLED HIVE**, same size inside as the 8-frame Dovetailed hive, and taking same inside furniture. This, in combination with the Winter-case, is the best hive for both summer and winter we have ever seen.—Full description and illustrations will appear in May number of **AMERICAN BEE-KEEPER**, and description and prices will be sent on application. It is the **CHEAPEST** hive made, and with the winter-case is the cheapest winter hive. Send for prices. Address

**The W. T. Falconer Mfg. Co.**  
**JAMESTOWN, N. Y.**

In responding to this advertisement mention GLEANINGS.

1878 **DADANT'S COMB FOUNDATION.** 1891

Half a Million Pounds Sold in Thirteen Years. Over \$200,000 in Value.

It is kept for sale by Messrs. T. G. Newman & Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Neb.; G. L. Tinker, New Philadelphia, O.; E. Kretchmer, Red Oak, Ia.; P. L. Viallon, Bayou Goula, La.; Jos. Nysewander, Des Moines, Ia.; C. H. Green, Waukesha, Wis.; G. B. Lewis & Co., Watertown, Wis.; J. Mattoon, Atwater, O.; Oliver Foster, Mt. Vernon, Ia.; C. Hertel, Freeburg, Ill.; E. T. Abbott, St. Joseph, Mo.; **E. Lovett, San Diego, Cal.**; **E. L. Gould & Co., Brantford, Ont., Can.**; Page, Keith & Schmidt, New London, Wis.; J. Stauffer & Son, Nappanee, Ind.; Berlin Fruit-Box Co., Berlin Heights, O.; E. R. Newcomb, Pleasant Valley, N. Y.; L. Hanssen, Davenport, Ia.; C. Theilman, Theilman-ton, Minn.; G. K. Hubbard, Fort Wayne, Ind.; T. H. Strickler, Solomon City, Kan.; E. C. Eaglesfield, Berlin, Wis.; Walter S. Pouder, Indianapolis, Ind.; Martin & Co., 1141 15th St., Denver, Col.; I. D. Lewis & Son, Hiawatha, Kan.; F. C. Erkel, LeSueur, Minn.; Mrs. J. N. Heator, Columbus, Neb.; Buckeye Bee Supply Co., New Carlisle, O., and numerous others  
It is the best, and guaranteed every inch equal to sample. All dealers who have tried it have increased their trade every year.

**SAMPLES, CATALOGUE, FREE TO ALL. SEND YOUR ADDRESS.**

1852 **LANGSTROTH ON THE HONEY-BEE. Revised.** 1891

Those who wish a book in which they will find, without difficulty, whatever information beginners desire, should send for this work. Its arrangement is such that any subject and all its references can be found very readily, by a system of indexing numbers. It is the most complete treatise in the English language.

—A FRENCH EDITION JUST PUBLISHED.—

## **HANDLING BEES (Price 8 cts.),**

is a chapter of the Langstroth revised, and contains instructions to beginners on the handling and taming of bees.

Bee-veils of Best Imported Material. Samples **FREE**. Smokers, Honey Sections, Extractors, Tin Pails for Honey, etc. Instructions to Beginners with Circular, Free.

**CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.**

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